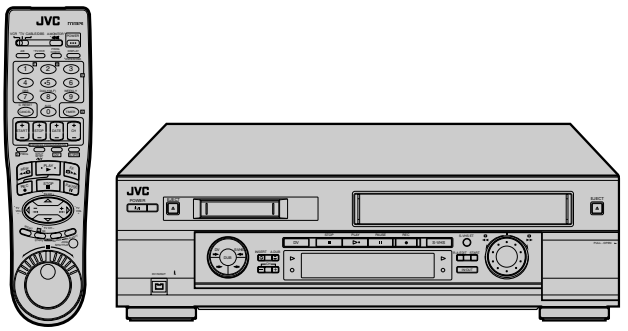
JVC

SERVICE MANUAL

Mini DV/S-VHS VIDEO CASSETTE RECORDER

HR-DVS2U



S-VHS
Mini DV NTSC
Hi-Fi
VCR Plus+ ® G3 CABLE BOX CONTROL
Super VHS ET

SPECIFICATIONS

GENERAL

Power requirement	: AC 120 V~, 60 Hz
Power consumption	
Power on	: 35 W
Power off	: 5.5 W
Temperature	
Operating	: 5°C to 40°C (41°F to 104°F)
Storage	: –20°C to 60°C (–4°F to 140°F)
Operating position	: Horizontal only
Dimensions (WxHxD)	: 435 mm x 127 mm x 390 mm
Weight	: 6.9 kg
Input/Output	: RCA connectors: (IN x 2, OUT x 2) S-Video connectors: (IN x 2, OUT x 2) DV connectors: (IN/OUT x 1) (4-pin, IEEE1394 conformity, digital input/output)

VHS DECK VIDEO/AUDIO

Signal system	: NTSC-type colour signal and EIA monochrome signal, 525 lines/60 fields
Recording system	: DA4 (Double Azimuth) head helical scan system
Format	: S-VHS/VHS NTSC standard
Signal-to-noise ratio	: 45 dB
Horizontal resolution	: 240 lines (VHS) 400 lines (S-VHS)
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Maximum recording time	
(SP)	: 210 min. with ST-210 video cassette
(EP)	: 630 min. with ST-210 video cassette

DV DECK VIDEO/AUDIO

Signal system	: NTSC-type colour signal, 525 lines/60 fields
Recording system	: Digital Component Recording
Format	: DV format (SD mode)
Cassette	: Mini DV Cassette
Maximum recording time	
(SP)	: 60 min. with M-DV60ME acassette
(LP)	: 90 min. with M-DV60ME cassette
Audio recording system	: PCM 48 kHz, 16 bit (2 ch)/ 32 kHz, 12 bit (4 ch)

TUNER

Tuning system	: Frequency-synthesized tuner
Channel coverage	
VHF	: Channels 2–13
UHF	: Channels 14–69
CATV	: 113 Channels

TIMER

Clock reference	: Quartz
Program capacity	: 1-year programmable timer/ 6 programs each on the VHS and DV deck
Memory backup time	: Approx. 60 min.

ACCESSORIES

Provided accessories	: RF cable (F-type), Infrared remote control unit, "AA" battery x 2, Audio/Video Cable, S-Video cable (4-pin), Controller

Specifications shown are for SP mode unless otherwise specified.
E. & O.E. Design and specifications subject to change without notice.

This service manual is printed on 100% recycled paper.
COPYRIGHT © 2001 VICTOR COMPANY OF JAPAN, LTD.

No. 82854
March 2001

TABLE OF CONTENTS

Section	Title	Page
	Important Safety Precautions	
	INSTRUCTIONS	
	1. DISASSEMBLY	
1.1	HOW TO REMOVE THE MAJOR PARTS	1-1
1.1.1	Introduction	1-1
1.2	HOW TO READ THE DISASSEMBLY AND ASSEMBLY	1-1
1.3	DISCONNECTION OF CONNECTORS (WIRES)	1-1
1.4	SCREWS USED CABINET COMPONENTS AND BOARD ASSEMBLIES	1-1
1.5	HOW TO REMOVE THE MAJOR PARTS <COM section>	1-2
1.5.1	Disassembly flow chart	1-2
1.5.2	Disassembly/assembly method <COM section>	1-2
1.6	HOW TO REMOVE THE MAJOR PARTS <VHS section>	1-4
1.6.1	Disassembly flow chart	1-4
1.6.2	DIsassembly/assembly method <VHS section>	1-4
1.7	HOW TO REMOVE THE MAJOR PARTS <DV section>	1-6
1.7.1	Disassembly flow chart	1-6
1.7.2	Disassembly/assembly method <DV section>	1-6
1.8	SERVICE POSITIONS	1-8
1.8.1	Service position <VHS SIDE>	1-8
1.8.2	Service position <DV SIDE>	1-9
1.9	MECHANISM SERVICE MODE	1-10
1.9.1	How to set the "MECHANISM SERVICE MODE"	1-10
1.10	CONNECTION	1-11
1.11	EMERGENCY DISPLAY FUNCTION	1-13
1.11.1	Displaying the emergency information	1-13
1.11.2	Clearing the emergency history	1-13
1.11.3	Emergency content description	1-14
1.11.4	Emergency detail information ①	1-15
1.11.5	Emergency detail information ②	1-16
	2. MECHANISM ADJUSTMENT (VHS)	
2.1	Before Starting Repair and Adjustment	2-1
2.1.1	Precautions	2-1
2.1.2	Checking for Proper Mechanical Operations	2-1
2.1.3	Manually Removing the Cassette Tape	2-1
2.1.4	Jigs and Tools Required for Adjustment	2-2
2.1.5	Maintenance and Inspection	2-3
2.2	Replacement of Major Parts	2-6
2.2.1	Before Starting Disassembling (Phase matching between mechanical parts)	2-6
2.2.2	How to Set the Mechanism Assembling Mode	2-6
2.2.3	Cassette Holder Assembly	2-6
2.2.4	Pinch Roller Arm Assembly	2-8
2.2.5	Guide Arm Assembly and Press Lever Assembly	2-8
2.2.6	Audio Control Head	2-8
2.2.7	Loading Motor	2-8
2.2.8	Capstan Motor	2-9
2.2.9	Pole Base Assembly (supply or take-up side)	2-9
2.2.10	Rotary Encoder	2-10
2.2.11	Clutch Unit	2-10
2.2.12	Change Lever Assembly, Direct Gear, Clutch Gear and Coupling Gear	2-10
2.2.13	Link Lever	2-11
2.2.14	Cassette Gear, Control Cam and Worm Gear	2-11
2.2.15	Control Plate	2-11
2.2.16	Loading Arm Gear (supply or take-up side) and Loading Arm Gear Shaft	2-12
2.2.17	Take-up Lever, Take-up Head and Control Plate Guide	2-13
2.2.18	Capstan Brake Assembly	2-13
2.2.19	Sub Brake Assembly (take-up side)	2-13
2.2.20	Main Brake Assembly (take-up side), Reel Disk (take-up side) and Main Brake Assembly (supply side)	2-13
2.2.21	Tension Brake Assembly, Reel Disk (supply side) and Tension Arm Assembly	2-14
2.2.22	Idler Lever, Idler Arm Assembly	2-14
2.2.23	Stator Assembly	2-14
2.2.24	Rotor Assembly	2-14
2.2.25	Upper Drum Assembly	2-15
2.3	Compatibility Adjustment	2-16
2.3.1	Checking/Adjustment of FM Waveform Linearity	2-16
2.3.2	Checking/Adjustment of the Height and Tilt of the Audio Control Head	2-17
2.3.3	Checking/Adjustment of the Audio Control Head Phase (X-Value)	2-17
2.3.4	Checking/Adjustment of the Standard Tracking Preset	2-18
2.3.5	Checking/Adjustment of the Tension Pole Position	2-18
	MECHANISM ADJUSTMENT (DV)	
2.9	PREPARATION	2-21
2.9.1	Precautions	2-21
2.9.2	Tools Required for Adjustments	2-21
2.9.3	Disassembly and Assembly Procedures	2-21
2.9.4	Screws and Washers Used in Disassembly/Assembly of the Mechanism Assembly	2-21
2.10	DISASSEMBLY/ASSEMBLY OF THE MECHANISM ASSEMBLY	2-22
2.10.1	Introduction	2-22
2.10.2	Mechanism Modes	2-22
2.11	MECHANISM TIMING CHART	2-24
2.12	MECHANISM ASSEMBLY/DISASSEMBLY PROCEDURE TABLE	2-25
2.13	DISASSEMBLY/ASSEMBLY	2-27
2.14	LIST OF PROCEDURES FOR DISASSEMBLY	2-35
2.15	MECHANISM DISASSEMBLY/ASSEMBLY SHEET	2-36
2.16	MECHANISM PHASE CHECK/ADJUSTMENT	2-38
2.17	POSITIONING THE TENSION POLE	2-39
2.18	COMPATIBILITY AND ERROR RATE ADJUSTMENTS	2-40
2.18.1	Preparation	2-40
2.18.2	Adjustment	2-40
2.18.3	Linearity adjustment	2-41
2.18.4	PB switching point adjustment	2-41
2.18.5	Error rate adjustment	2-41
2.18.6	Error rate measuring method	2-41
2.19	TAPE EJECTION	2-42

Section	Title	Page
	3. ELECTRICAL ADJUSTMENT (VHS)	
3.1	PRECAUTION	3-1
3.1.1	Required test equipments	3-1
3.1.2	Required adjustment tools	3-1
3.1.3	Color (colour) bar signal,Color (colour) bar pattern	3-1
3.1.4	Switch settings and standard precautions	3-1
3.1.5	EVR Adjustment	3-1
3.2	SERVO CIRCUIT	3-2
3.2.1	Switching point	3-2
3.2.2	Slow tracking preset	3-2
3.3	VIDEO CIRCUIT	3-2
3.3.1	D/A level	3-2
3.3.2	EE Y level	3-3
3.3.3	PB Y level (S-VHS / VHS)	3-3
3.3.4	REC color (colour) level	3-3
3.3.5	Video EQ (Frequency response)	3-4
3.3.6	AUTO PICTURE initial setting	3-4
3.3.7	DV EE Y level	3-4
3.4	AUDIO CIRCUIT	3-5
3.4.1	Audio REC FM	3-5
3.5	DEMODULATOR CIRCUIT	3-5
3.5.1	Input level	3-5
3.5.2	Stereo VCO	3-5
3.5.3	Stereo filter	3-6
3.5.4	Separation - 1	3-6
3.5.5	Separation - 2	3-6
3.5.6	SAP VCO	3-6
	ELECTRICAL ADJUSTMENT (DV)	
3.6	PREPARATION	3-7
3.6.1	Precautions	3-7
3.6.2	Equipment required for adjustment	3-7
3.6.3	Tools required for adjustments	3-7
3.6.4	Setup	3-7
	4. CHARTS AND DIAGRAMS	
	NOTES OF SCHEMATIC DIAGRAM	4-1
	CIRCUIT BOARD NOTES	4-2
4.1	BOARD INTERCONNECTIONS	4-3
4.2	SWITCHING REGULATOR AND REGULATOR SCHEMATIC DIAGRAMS	4-5
4.3	VIDEO/AUDIO SCHEMATIC DIAGRAM	4-7
4.4	SYSTEM CONTROL SCHEMATIC DIAGRAM	4-9
4.5	SUB CPU SCHEMATIC DIAGRAM	4-13
4.6	TUNER SCHEMATIC DIAGRAM	4-15
4.7	VIDEO I/O SWITCH SCHEMATIC DIAGRAM	4-17
4.8	AUDIO I/O SCHEMATIC DIAGRAM	4-19
4.9	CONNECTION SCHEMATIC DIAGRAM	4-21
4.10	3D DIGITAL/4M SCHEMATIC DIAGRAM	4-23
4.11	TERMINAL SCHEMATIC DIAGRAM	4-25
4.12	DEMODULATOR SCHEMATIC DIAGRAM	4-27
4.13	S-SUB SCHEMATIC DIAGRAM	4-29
4.14	MDA SCHEMATIC DIAGRAM	4-31
4.15	PRE/REC SCHEMATIC DIAGRAM	4-33
4.16	ON SCREEN SCHEMATIC DIAGRAM	4-35
4.17	DISPLAY, EJECT SW, LED/SW, JACK AND JOG SCHEMATIC DIAGRAMS	4-37
4.18	DV SYSTEM CONTROL SCHEMATIC DIAGRAM	4-39
4.19	DV MSD SCHEMATIC DIAGRAM	4-41
4.20	DV MAIN SCHEMATIC DIAGRAM	4-43
4.21	DV I/O SCHEMATIC DIAGRAM	4-45
4.22	DV V OUT SCHEMATIC DIAGRAM	4-47
4.23	AUDIO AD/DA SCHEMATIC DIAGRAM	4-49
4.24	DV DSP SCHEMATIC DIAGRAM	4-51
4.25	SWITCHING REGULATOR AND REGULATOR CIRCUIT BOARDS	4-53
4.26	3D DIGITAL/4M AND S-SUB CIRCUIT BOARDS	4-55
4.27	TERMINAL CIRCUIT BOARD	4-56
4.28	S-SUB AND DISPLAY, EJECT SW, JACK, LED/SW, JOG CIRCUIT BOARDS	4-57
4.29	MAIN CIRCUIT BOARD	4-59
4.30	DEMODULATOR AND ON SCREEN CIRCUIT BOARDS	4-62
4.31	P/R MDA, DV MAIN CIRCUIT BOARDS	4-63
4.32	FDP GRID ASSIGNMENT AND ANODE CONNECTION	4-69
4.33	REMOTE CONTROL SCHEMATIC DIAGRAM	4-70
4.34	WAVEFORMS	4-71
4.35	VOLTAGE CHARTS	4-73
4.36	CPU PIN FUNCTION	4-76
4.37	SYSTEM CONTROL BLOCK DIAGRAM (VHS)	4-77
4.38	VIDEO BLOCK DIAGRAM(VHS)	4-79
4.39	AUDIO BLOCK DIAGRAM (VHS)	4-83
4.40	SYSTEM CONTROL BLOCK DIAGRAM (DV)	4-85
4.41	VIDEO BLOCK DIAGRAM (DV)	4-87
	5. PARTS LIST	
5.1	PACKING AND ACCESSORY ASSEMBLY <M1>	5-1
5.2	FINAL ASSEMBLY <M2>	5-2
5.3	MECHANISM ASSEMBLY (VHS) <M3>	5-4
5.4	MECHANISM ASSEMBLY (DV) <M4>	5-6
5.5	ELECTRICAL PARTS LIST	5-8
	SW REGULATOR BOARD ASSEMBLY <01>	5-8
	REGULATOR BOARD ASSEMBLY <02>	5-9
	MAIN BOARD ASSEMBLY <03>	5-10
	3D DIGITAL/4M BOARD ASSEMBLY <05>	5-18
	TERMINAL BOARD ASSEMBLY <06>	5-19
	A/C HEAD BOARD ASSEMBLY <12>	5-20
	DEMOD BOARD ASSEMBLY <14>	5-20
	S-SUB BOARD ASSEMBLY <15>	5-21
	DV PRE/REC MDA BOARD ASSEMBLY <16>	5-22
	ON SCREEN BOARD ASSEMBLY <17>	5-23
	EJECT SW BOARD ASSEMBLY <27>	5-24
	SW/DISPLAY BOARD ASSEMBLY <28>	5-24
	JACK BOARD ASSEMBLY <36>	5-25
	LED/SW BOARD ASSEMBLY <47>	5-25
	DV MAIN BOARD ASSEMBLY <50>	5-25
	LOADING MOTOR BOARD ASSEMBLY <55>	5-31
	JOG BOARD ASSEMBLY <85>	5-31

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded ( ) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape 3) Spacers 5) Barrier
   2) PVC tubing 4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

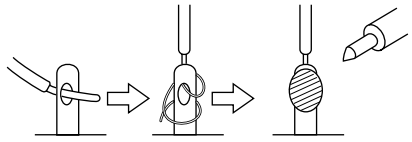


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

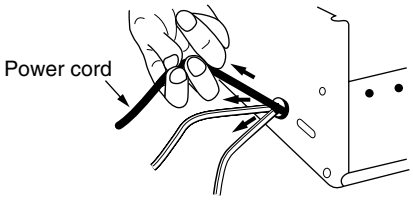


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission.
    Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits.
    Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) Connector part number : E03830-001
    2) Required tool : Connector crimping tool of the proper type which will not damage insulated parts.
    3) Replacement procedure
    (1) Remove the old connector by cutting the wires at a point close to the connector.
    Important : Do not reuse a connector (discard it).

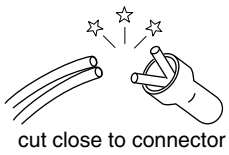


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

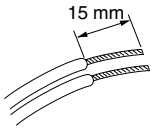


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

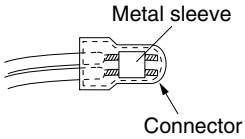


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

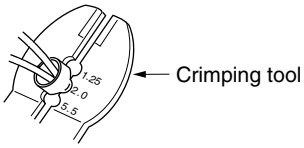


Fig.6

(5) Check the four points noted in Fig.7.

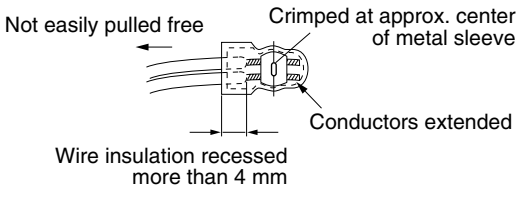

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test

Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

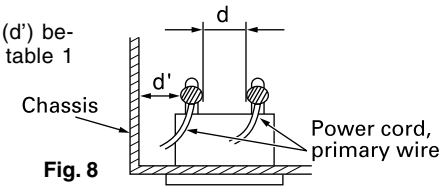


Fig. 8

4. Leakage current test

Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).

Measuring Method : (Power ON)

Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

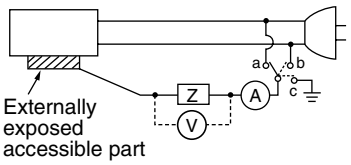


Fig. 9

5. Grounding (Class 1 model only)

Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).

Measuring Method:

Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

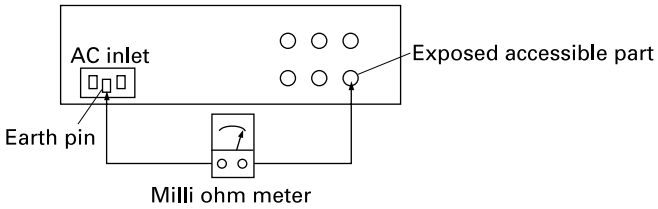


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

SECTION 1
DISASSEMBLY

1.1 HOW TO REMOVE THE MAJOR PARTS

1.1.1 Introduction

This set is a double-deck video recorder integrating a Mini DV deck and a VHS deck. Its internal structure is divided into three sections that include the power supply, VHS and DV sections. Therefore, the removal of major parts will also be described under three separate sections as listed below.

1. COMMON section
2. VHS section
3. DV section

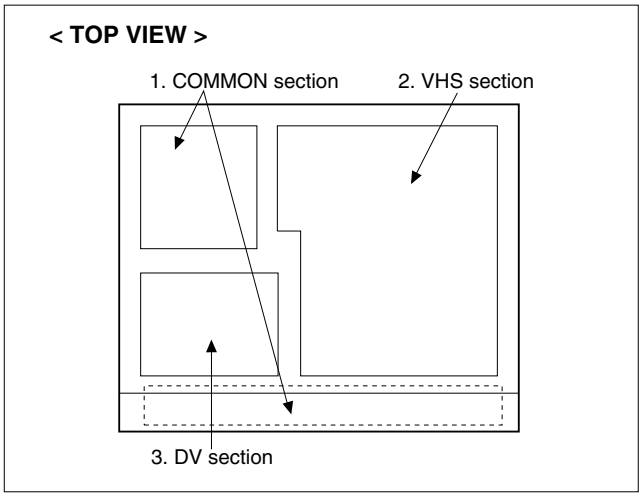


Fig. 1-1-1

1.2 HOW TO READ THE DISASSEMBLY AND ASSEMBLY

Step/ Loc No.	Part name	Fig. No.	Point	Note
①	Top cover, Bracket	COM1	4(S1), 3(S2), 2(L1), (L2) 2(S3)	—
②	Front panel assembly	COM2	8(L3), CN7507(WR1), CN3011(WR2)	<Note 1,2,3,4>
↑ (1)	↑ (2)	↑ (3)	↑ (4)	↑ (5)

(1) Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.
(2) Part name to be removed or installed.
(3) Fig. No. showing procedure or part location.
(4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P= Spring, W= Washer, S= Screw, L= Locking tab, SD= Solder, CN**(WR**)= Remove the wire (WR**) from the connector (CN**).

Note:

- ***The bracketed ( ) WR of the connector symbol are assigned nos. in priority order and do not correspond to those on the spare parts list.***

(5) Adjustment information for installation

1.3 DISCONNECTION OF CONNECTORS (WIRES)

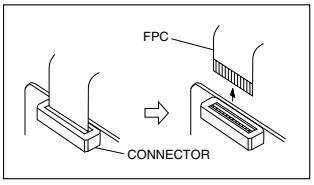


Fig. 1-3-1

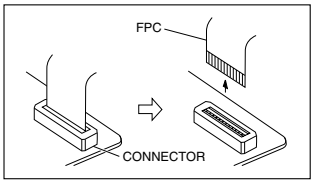


Fig. 1-3-2

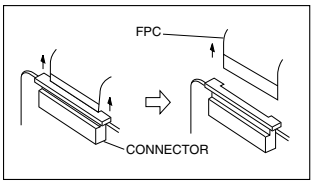


Fig. 1-3-3

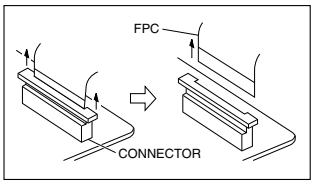


Fig. 1-3-4

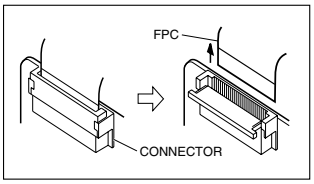


Fig. 1-3-5

1.4 SCREWS USED CABINET COMPONENTS AND BOARD ASSEMBLIES

Table 1-4-1 below shows the symbols, shapes, colors and part numbers of screw that are used in the cabinet components and board assemblies and are appearing in the disassembling/reassembling diagrams in this manual.
When screwing them again in reassembling, be sure to use them correctly referring to the following table.

Notes:

- Screw that are asterisked (marked with*) in the shape column are fixed with screw lock agent. If such the screw is once removed, never use it again.
- The Screw symbols are assigned nos. in priority order and do not correspond to those on the spare parts list.

SYMBOL	PARTS NO.	COLOR
S1	QYTDST3006R	SILVER BLACK
S2	QYTDST3006M	BLACK
S3	QYTDSF3010Z	GOLD
S4	QYTDSF2606Z	GOLD
S5	QYTDST3006Z	GOLD
S6	QYTDSF3008M	BLACK
S7	QYTDST2610Z	GOLD
S8	PQ21623-2-5	GOLD
S9	PQ40413	BLACK
S10	LP40700-001A	BLACK
S11	QYTDSP2004Z	GOLD
S12	QYTDST2004Z	GOLD
S13	YQ43893	SILVER

Table 1-4-1

1.5 HOW TO REMOVE THE MAJOR PARTS <COM section>

1.5.1 Disassembly flow chart

This flowchart shows the disassembly procedure for the exterior parts and electrical parts.
Basically, reverse this procedure when assembling them.

① Top cover, Bracket
↓
② Front panel assembly
↓
③ Display board assembly, Display/SW board assembly, SW board assembly, LED1, 2 board assembly
↓
④ SW REG board assembly
↓
⑤ Regulator board assembly
↓
⑥ Rear cover

1.5.2 Disassembly/assembly method <COM section>

Step/ Loc No.	Part name	Fig. No.	Point	Note
①	Top cover, Bracket	COM1	4(S1), 3(S2), 2(L1), (L2) 2(S3)	—
②	Front panel assembly	COM2	8(L3), CN7507(WR1), CN3011(WR2)	<Note 1,2,3,4>
③	Display board assembly, LED/SW board assembly, Eject SW board assembly, Jack board assembly, Jog board assembly	COM3	10(S4) 6(S4), Knob(Jog), Knob(Shuttle),	—
④	SW REG board assembly	COM4	2(S5), 2(L4), (L5) CN5301(WR3),	<Note 1, 5>
⑤	Regulator board assembly	COM5	3(L6), CN5322(WR4), CN5321(WR5), CN5325(WR6), CN5324(WR7), CN5323(WR8)	<Note 1, 5>
⑥	Rear cover	COM6	4(S2), 3(S6), Fan motor	<NOTE 6>

<Note 1>
When attaching the FPC, be sure to connect it in the correct orientation.

<Note 2>
When attaching the front panel assy, make sure that the door openers of both decks (DV, VHS) are in the down position.

<Note 3>
When attaching the front panel assy, be careful not to damage the DV terminals.

<Note 4>
When attaching the FPC take care that it is not caught.
Pass the DV-side FPC between the base (2) and DV Main board assy.
Pass the two VHS-side FPCs below the base (1).

<Note 5>
When removing the SW REG board assembly or Regulator board assembly, unhook the several spacers connecting it with pliers from the top side.

<Note 6>
Perform the work by leaving fan motor attached to the rear cover except when replacing the fan motor.
When attaching the rear cover, please be careful with the wiring.

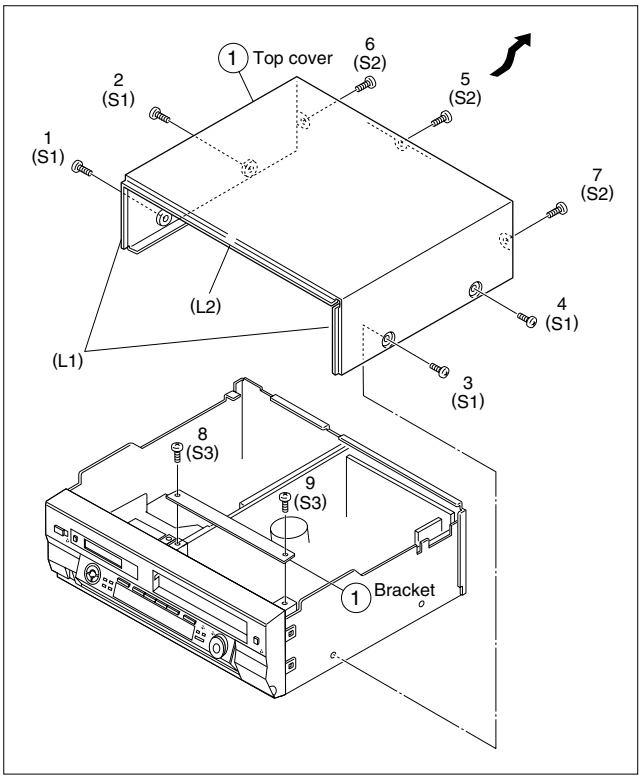


Fig. COM1

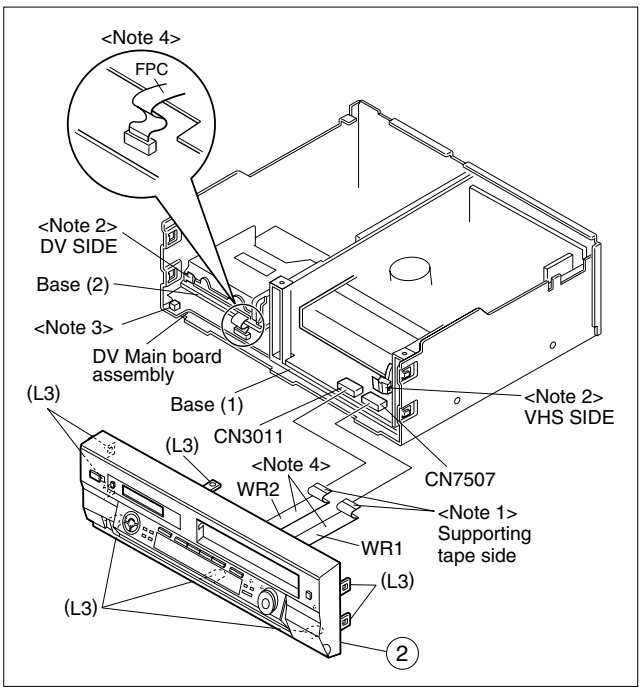


Fig. COM2

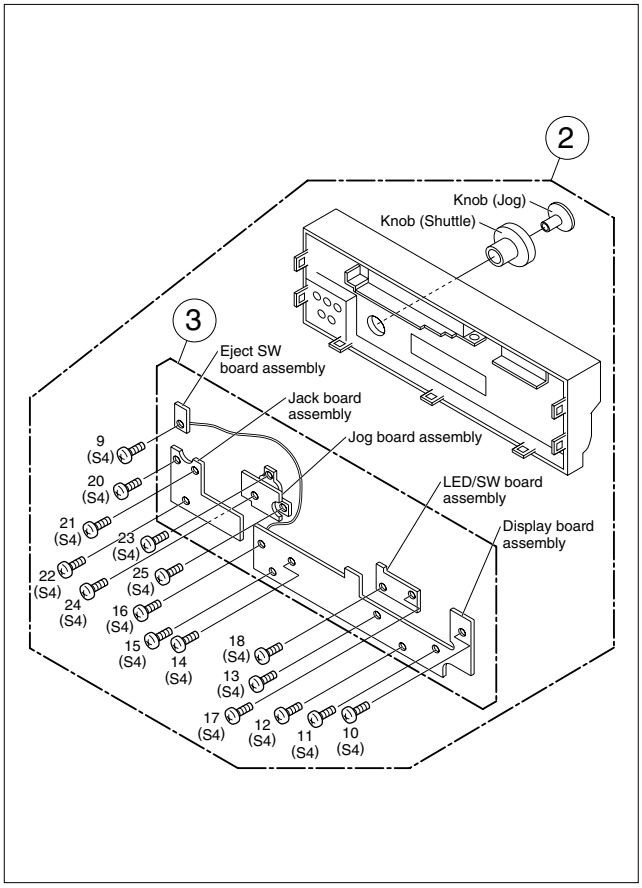


Fig. COM3

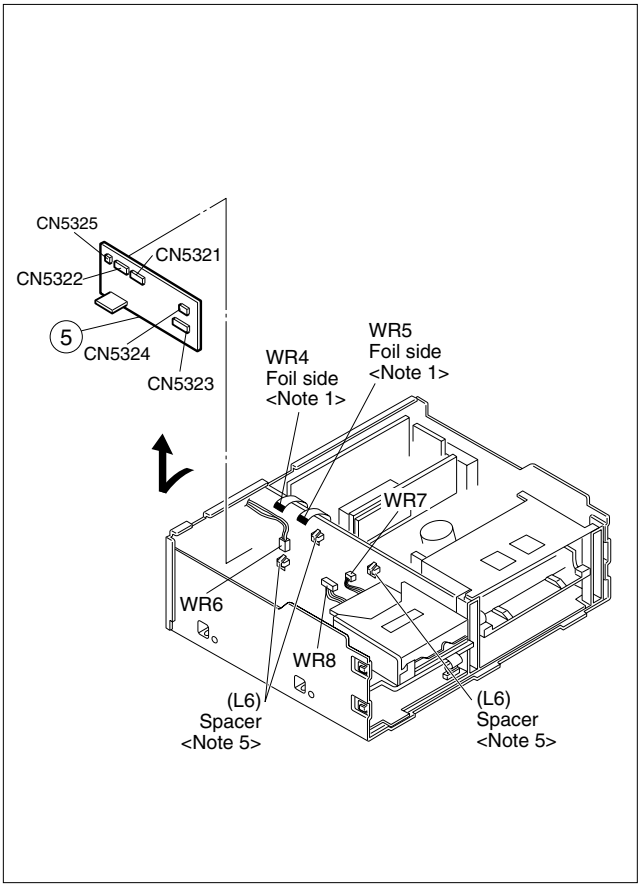


Fig. COM5

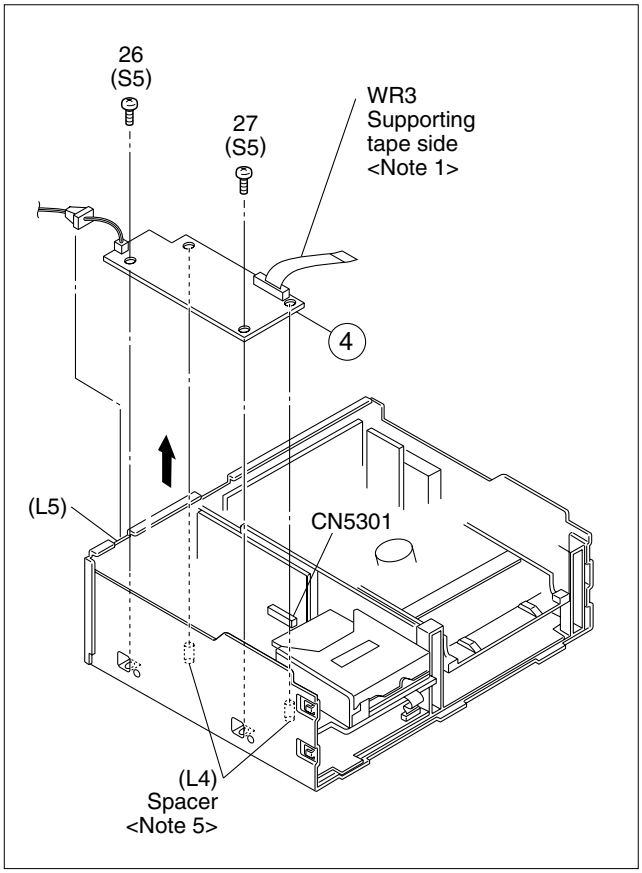


Fig. COM4

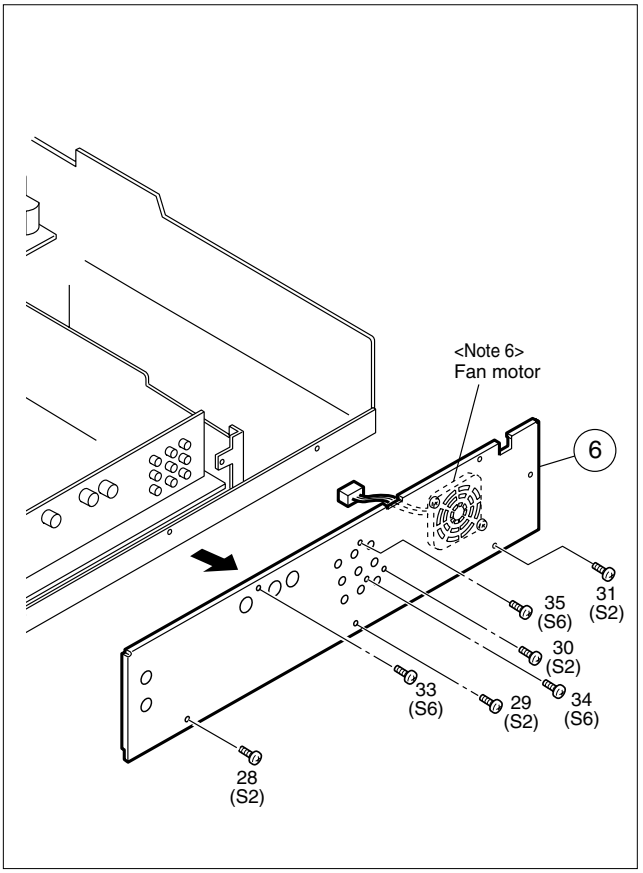


Fig. COM6

1.6 HOW TO REMOVE THE MAJOR PARTS <VHS section>

1.6.1 Disassembly flow chart

This flowchart shows the disassembly procedure for the exterior parts and electrical parts.
Basically, reverse this procedure when assembling them.
However, it is required to remove the common section parts as far as①"Top cover Bracket" and②"Front panel assembly" in advance. (See section 1.5.)

① Drum assembly
↓
② Mechanism assembly
↓
③ Main board assembly
↓
④ Base (1)

1.6.2 DIsassembly/assembly method <VHS section>

Step/ Loc No.	Part name	Fig. No.	Point	Note
①	Drum assembly	V1	3(S7), CON1(WR9), CN1(WR10)	<Note 1,2>
	(Inertia plate)		4(L1)	
	(Roller arm assy)		(P1), (L2)	
②	Mechanism assembly	V2	2(S8), (S9), (S10), (L3), (L4), CN1(WR11),	<Note 2,4>
③	Main board assembly	V3	2(S3), (S5), CN5321(WR5), CN5322(WR4), CN3014(WR14), CN703(WR15), CN2601(WR16)	<Note 2>
④	Base (1)	V4	(S3), 3(S5)	—

<Note 1>
When attaching or removing the FPC, take care not to disconnect any of the wires.

<Note 2>
When attaching the FPC, be sure to connect it in the correct orientation.

<Note 3>
When attaching wires, connect them in the correct orientation.

<Note 4>
- When it is required to remove the screws (S8) retaining the Mechanism assembly, please refer to the "Procedures for Lowering the Cassette holder assembly"(See on page 1-5).
- When removing the Mechanism assembly only, unhook the two spacers connecting it with the Main board assembly with pliers from the back side of the Main board assembly first, and then remove the Mechanism assembly.
- When reattaching the Mechanism assembly to the Main board assembly, take care not to damage the sensors on the Main board assembly (D3001: LED, Q3002: Start sensor, Q3003: End sensor, S3002: S cassette switch).

Procedures for Lowering the Cassette holder assembly

As the mechanism of this unit is integrated with the Housing assembly, the holder must be lowered and the two screws unscrewed when removing the Mechanism assembly.

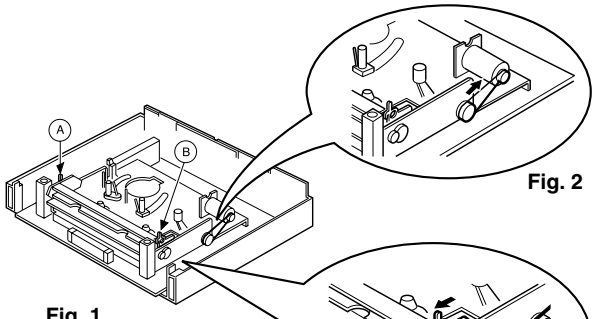


Fig. 1

Fig. 2

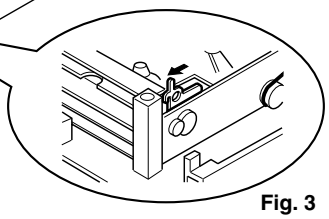


Fig. 3

Turn the loading motor pulley in the direction as indicated by Fig.2. As both Ⓐ and Ⓑ levers are lodged twice, push the levers in the direction as indicated by Fig.3 to release them. When pushing the levers, do it in the order of Ⓐ, Ⓑ, Ⓑ, Ⓐ. When the holder has been lowered, turn the pulley until the cassette holder is securely in place without allowing any up/down movement.

Procedures for Lowering the Cassette holder assembly

Note: When installing the Drum assembly, secure the screws (S7) in the order of ⓐ, ⓑ, ⓒ.

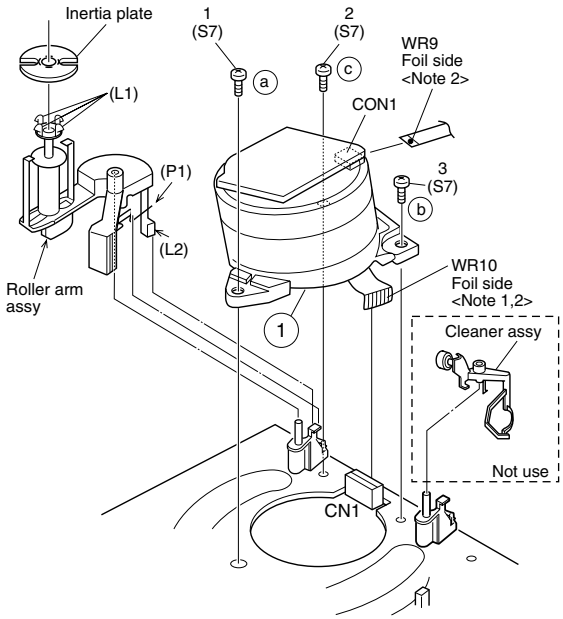


Fig. V1

Note: When installing the Mechanism assembly, secure the screws (S8) in the order of ⓐ,ⓑ.

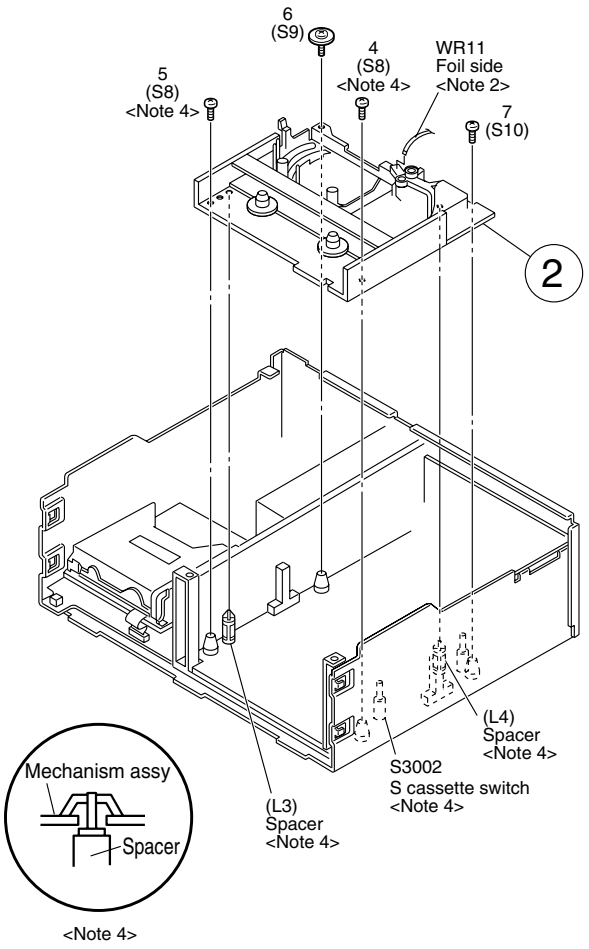


Fig. V2

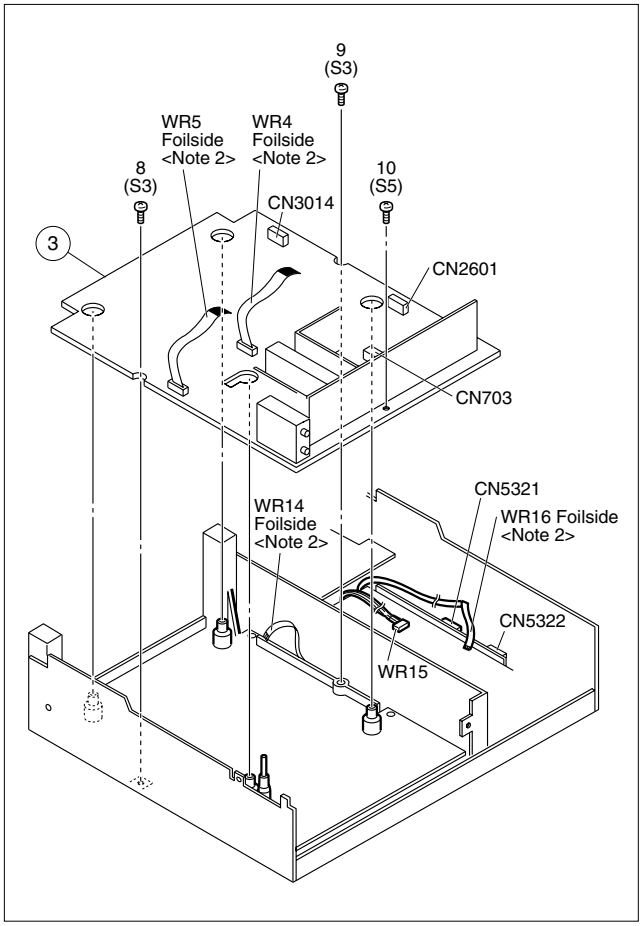


Fig. V3

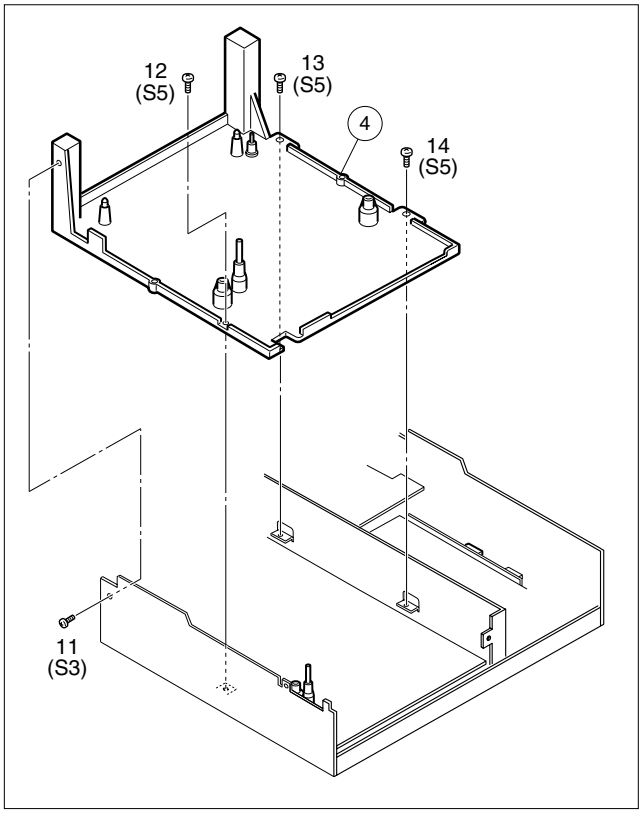


Fig. V4

1.7 HOW TO REMOVE THE MAJOR PARTS <DV section>

1.7.1 Disassembly flow chart

This flowchart shows the disassembly procedure for the exterior parts and electrical parts.
Basically, reverse this procedure when assembling them.
However, it is required to remove the common section parts as far as① "Top cover, Bracket" and② "Front panel assembly" in advance. (See section 1.5.)

① Mechanism assembly, P/R MDA board assembly
↓
② Cassette housing assembly
↓
③ P/R MDA board assembly
↓
④ Mechanism assembly
↓
⑤ Drum assembly
↓
⑥ DV Main board assembly

1.7.2 Disassembly/assembly method <DV section>

Step/ Loc No.	Part name	Fig. No.	Point	Note
①	Mechanism assembly, P/R MDA board assembly	D1	4(S5), CN1502(WR17), CN5002(WR18), CN5506(WR19), CN5501(WR7)	<Note 1>
②	Cassette housing assembly	D2	2(S11),2(L1),2(L2), CN5507(WR20)	—
③	P/R MDA board assembly	D3	(S12),(S11),2(S5), CN5502(WR21), CN5505(WR22), CN5503(WR23), CN5504(WR24), CN5001(WR25), Earth plate	—
④	Mechanism assembly	D4	3(S4), 2(L3)	—
⑤	Drum assembly	D5	3(S13)	<Note 2>
⑥	DV Main board assembly	D6	4(S5), CN1002(WR14), CN3701(WR16), CN1001(WR8), CN3501(WR15)	<Note 3,4>

<Note 1>
With due regard to operational considerations, remove the parts located on the base (2) (i.e. Mechanism assembly, P/R MDA board assembly etc.) together before removing the major parts.

<Note 2>
Take care not to scratch or damage the drum assembly by the cleaner assembly when performing work.

<Note 3>
Take care not to damage the board assembly when detaching parts.

<Note 4>
When attaching the FPC, be sure to connect it in the correct orientation.

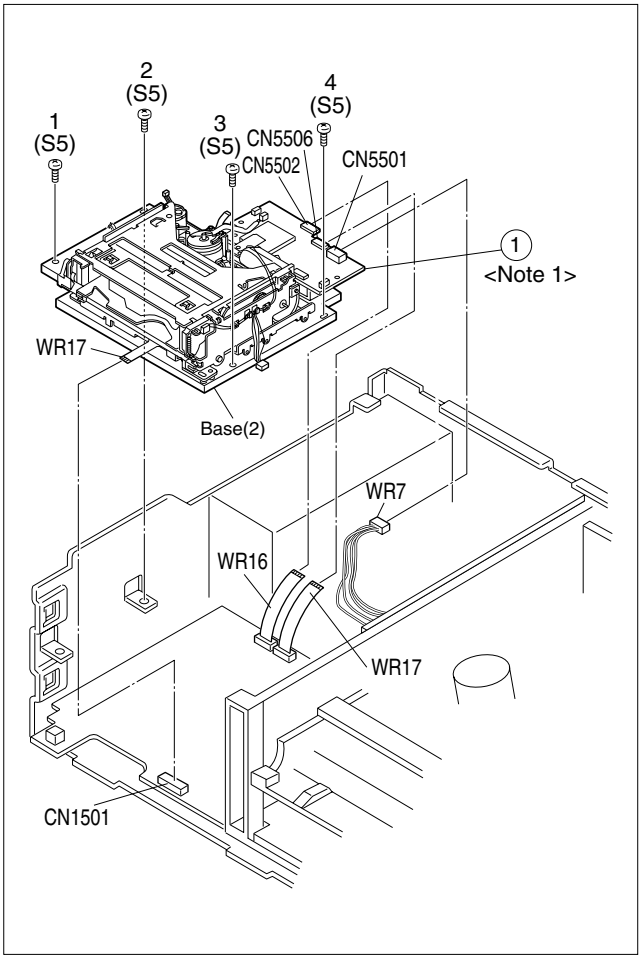


Fig. D1

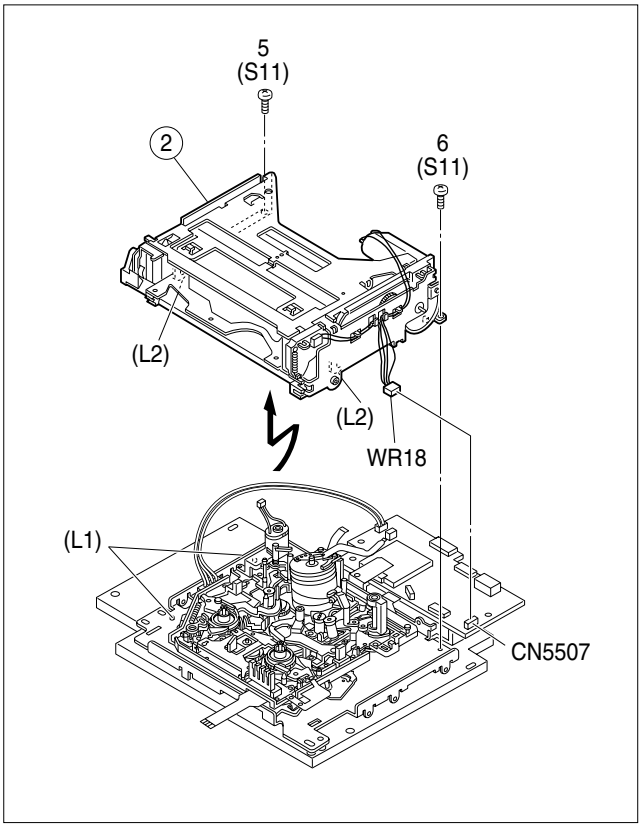


Fig. D2

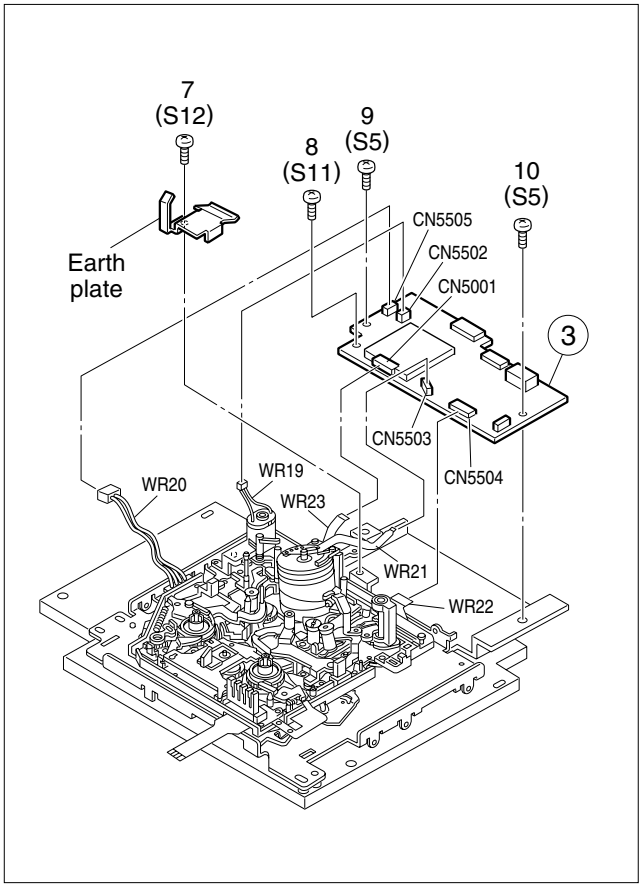


Fig. D3

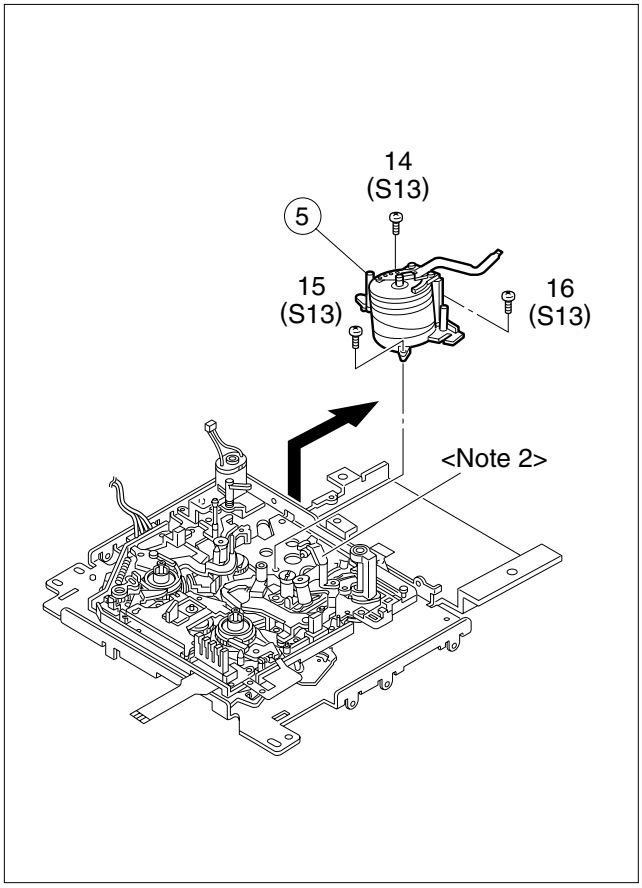


Fig. D5

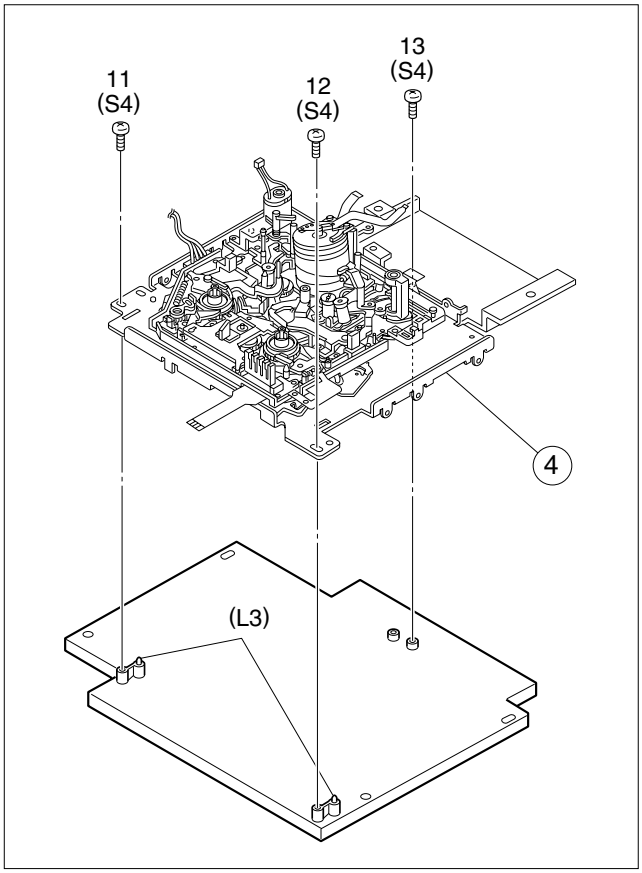


Fig. D4

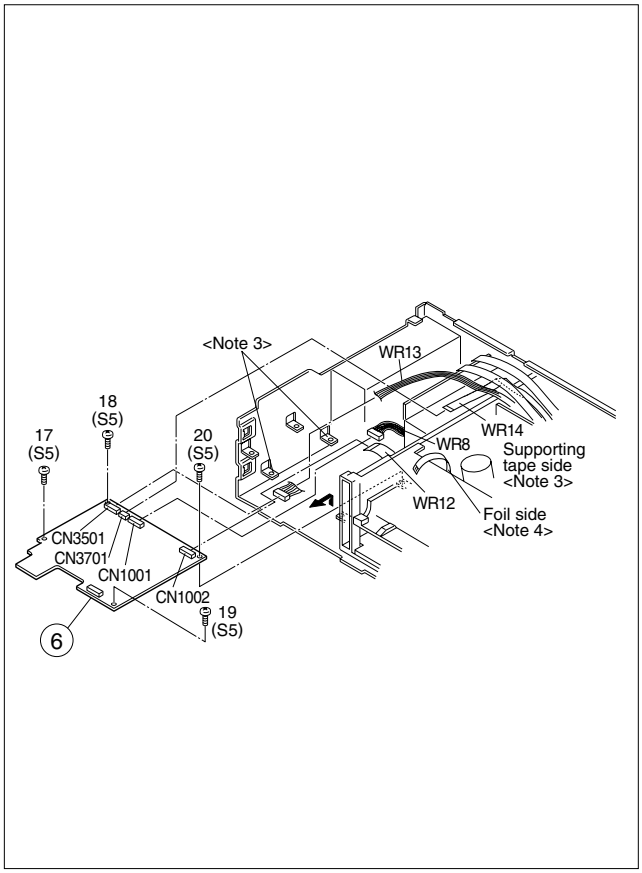


Fig. D6

1.8 SERVICE POSITIONS

The servicing locations for use in troubleshooting or servicing of the set are provided separately for the VHS and DV.

Ⅰ **SERVICE POSITIONS <VHS SIDE>**

Ⅱ **SERVICE POSITIONS <DV SIDE>**

1.8.1 Service position <VHS SIDE>

<Removal>

(1) Remove the top cover and bracket.
(2) Remove the front panel assembly.
(3) Remove the MAIN board assembly together with the mechanism assembly.

		Fig. No. (Page)	Screw	Hook, etc.	Connector	Note
(1)	Top cover, Bracket	COM1 (1-3)	9 (No.1-9)	2 + 1 (L1,2)	0	—
(2)	Front panel assembly	COM2 (1-3)	0	8 (L3)	2 (CN7507/ CN3011)	—
(3)	Rear cover	COM6 (1-3)	7 (No.28-35)	0	1 CN5325	—
(4)	Main board assembly (etc.)	V2, V3 (1-6)	13 (No.4-16)	0	5 (CN5321/ CN5322/ CN3014/ CN703/ CN2601)	—

Table 1-8-1

< Installation >

(1) Stand up the bottom chassis assembly so that the DV/ Regulator side is in the lower position.
(2) Connect the PATCH CORD to the three FPCs then connect CN3014, CN7508 and CN7509.
(3) By connecting a total of two FPCs and wires (CN703/ CN2601), carry out the installation so that the Main board assembly comes in the upper position.

Point: • Take care that the FPCs and wires are not subjected to stress in this positioning.

(4) Connect the PATCH CORDS to the two FPCs of the front panel assembly, then connect the CORDS to the CN7507/CN3011.

For the PATCH CORD is required, see Table 1-8-3.

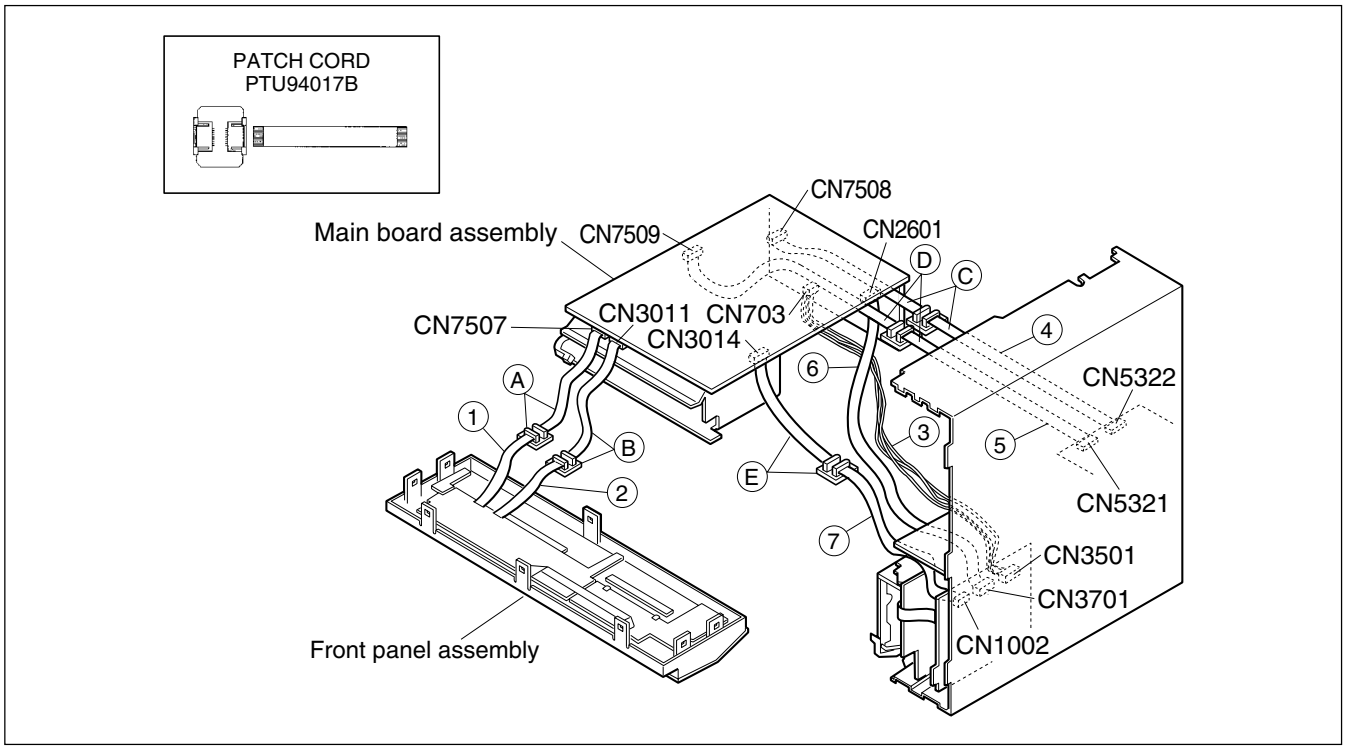


Fig. 1-8-1 Service position <VHS side>

1.8.2 Service position <DV SIDE>

<Removal>

(1) Remove the top cover and bracket.
(2) Remove the front panel assembly.
(3) Remove the mechanism assembly (DV side) together with the base (2).
(4) Remove the DV Main board assembly.

Note:

- ***Place an insulation sheet on the mechanism assembly (VHS side), then remove the DV Main board assembly and place it on the insulation sheet.***
  When removing the DV Main board assembly, only remove a connector CN1002 out of four.
  Take care not to damage the parts during operating.

		Fig. No. (Page)	Screw	Hook, etc.	Connector	Note
(1)	Top cover, Bracket	COM1 (1-3)	9 (No.1-9)	2 + 1 (L1,2)	0	—
(2)	Front panel assembly	COM2 (1-3)	0	8 (L3)	2 (CN7507/ CN3011)	—
(3)	Mechanism (DV SIDE)/ BASE (2)	D1 (1-7)	4 (No.1-4)	0	4 (CN1502/ CN5002/ CN5506/ CN5501)	—
(4)	DV Main board assembly	D6 (1-8)	4 (No.17-20)	0	1 (CN1002)	Note

Table 1-8-2

< Installation >

For the PATCH CORDS, see Table 1-8-3.
The patch cords that are indicated in Table 1-8-3 are in one package.

(1) Connect a PATCH CORD to the FPC, and connect the end to the connector CN1002.
(2) Connect PATCH CORDS to the three connectors/FPCs (CN5506/CN5002/CN1502).
(3) Place the mechanism assembly (DV side) on the original position and connect the four wires/FPCs/connectors (CN5501/CN5506/CN5002/CN1502).
(4) Connect PATCH CORDS to the two FPCs of the FRONT PANEL ASSEMBLY, and connect the ends to the CN7507 and CN3011.

	Board to Board	Wire
Ⓐ	PTU94022-16	QUQ112-1840CG
Ⓑ	PTU94022-18	QUQ112-1640CG
Ⓒ	PTU94022-11	QUQ212-1140CG
Ⓓ	PTU94022-15	QUQ212-1540CG
Ⓔ	YTU94072-06	QUQ210-0640CG
Ⓕ	YTU94074-15	QUQ105-1540AA
Ⓖ	YTU94074-26	QUQ105-2640AA
Ⓗ	YTU94074-20	QUQ105-2040AA

Table 1-8-3

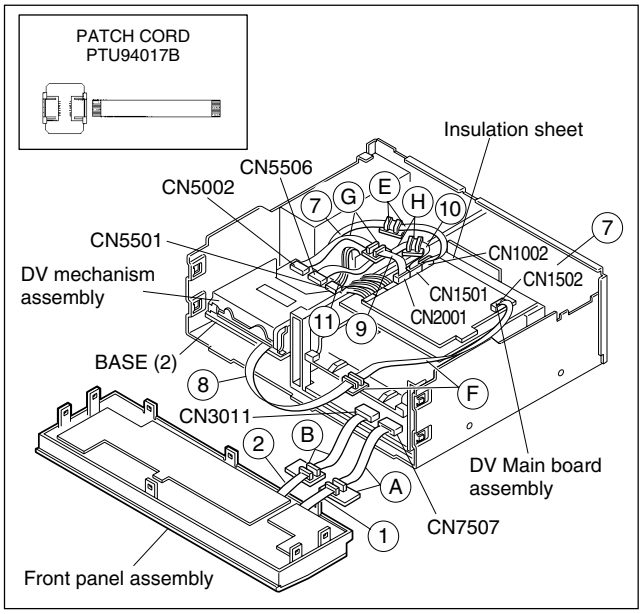


Fig. 1-8-2 Service position <DV side>

	SYMBOL	CONNECTOR (WIRE) CONNECTIONS			PIN No	PATCH CORD
Ⅰ / Ⅱ	①	MAIN CN7507	—	JACK CN7002	16	Ⓐ
Ⅰ / Ⅱ	②	MAIN CN3011	—	DISPLAY CN7001	18	Ⓑ
Ⅰ	③	MAIN CN703	—	DV MAIN CN3501	6	—
Ⅰ	④	MAIN CN7508	—	REGULATOR CN5322	13	Ⓒ
Ⅰ	⑤	MAIN CN7509	—	REGULATOR CN5321	15	Ⓓ
Ⅰ	⑥	MAIN CN2601	—	DV MAIN CN3701	8	—
Ⅰ / Ⅱ	⑦	MAIN CN3014	—	DV MAIN CN1002	6	Ⓔ
Ⅱ	⑧	DV MAIN CN1502	—	SENSOR	15	Ⓕ
Ⅱ	⑨	P/R MDA CN5002	—	DV MAIN CN2001	26	Ⓖ
Ⅱ	⑩	P/R MDA CN5506	—	DV MAIN CN1501	20	Ⓗ
Ⅱ	⑪	REGULATOR CN5324	—	P/R MDA CN5501	5	—

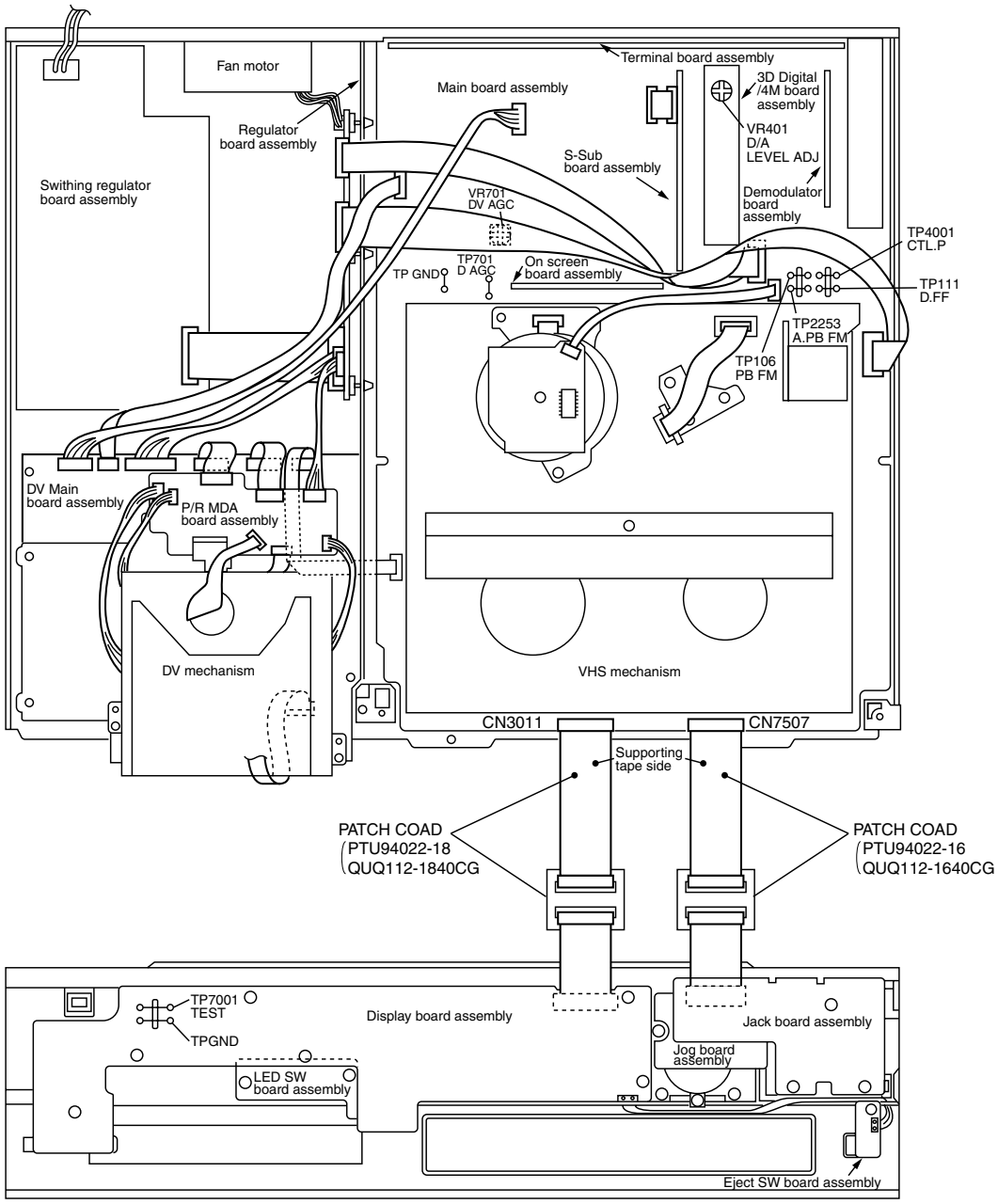
Table 1-8-4 Connection of Connectors

1.9 MECHANISM SERVICE MODE

This model has a unique function to enter the mechanism into every operation mode without loading of any cassette tape. This function is called the “MECHANISM SERVICE MODE”.

1.9.1 How to set the "MECHANISM SERVICE MODE"

(1) Disconnect VCR from AC.
(2) Connect TPGND and TP7001 (TEST) on the Display board assembly with a jump wire.
(3) Connect VCR to AC.
(4) Press the POWER button.
(5) With lock levers Ⓐ Ⓑ on the left and right of the Cassette holder assembly pulled toward the front, slide the holder in the same direction as the cassette insertion direction. (For the positions of lock levers Ⓐ Ⓑ, refer to the “Procedures for Lowering the Cassette holder assembly” on page 1-5 of 1.6 HOW TO REMOVE THE MAJOR PARTS <VHS section>
(6) The cassette holder lowers and, when the loading has completed, the mechanism enters the desired mode.

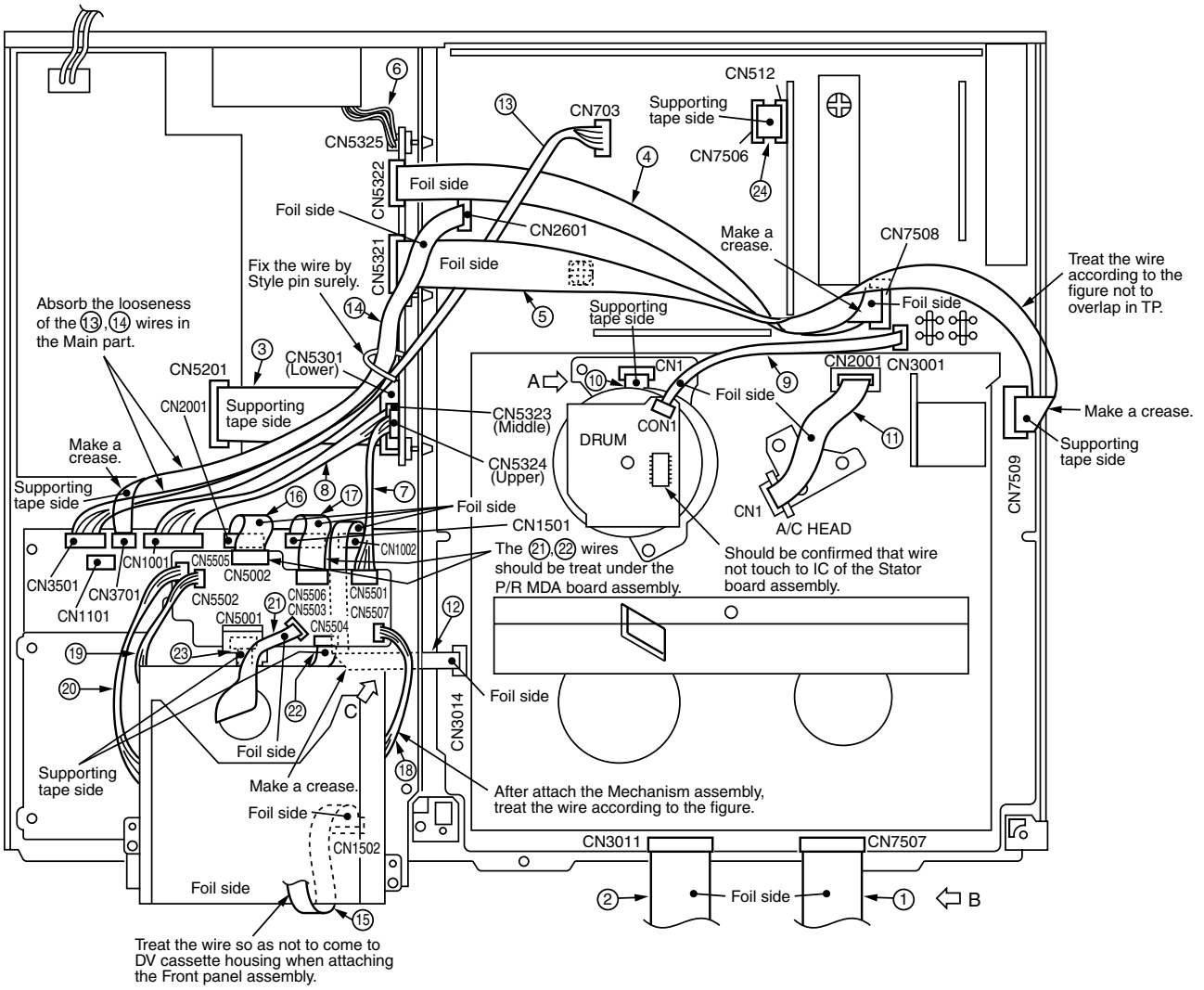


<Front panel assembly>

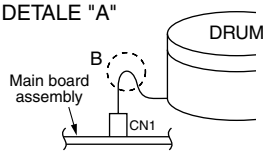
Fig. 1-9-1

1.10 CONNECTION

TOP VIEW

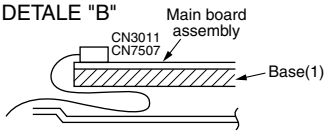


DETALE "A"



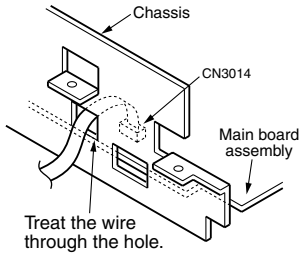
Absorb the looseness of the wire in the B part.

DETALE "B"



Treat the front wires according to the figure.

DETALE "C"



Treat the wire through the hole.

[CAUTION]

Insert the FPC wires as shown below.

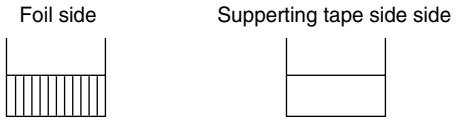


Fig. 1-10-1 Top view

Fig. No.	Symbol	Connection					Pin No.	Type (FPC/ WIRE)
		Connected point		⟷	Connected point			
①	WR1	MAIN	CN7507	⟷	JACK	CN7002	16	FPC
②	WR2	MAIN	CN3011	⟷	DISPLAY	CN7001	18	FPC
③	WR3	REGULATOR	CN5301	⟷	SW REG	CN5201	19	FPC
④	WR4	REGULATOR	CN5322	⟷	MAIN	CN7508	11	FPC
⑤	WR5	REGULATOR	CN5321	⟷	MAIN	CN7509	15	FPC
⑥	WR6	REGULATOR	CN5325	⟷	FAN MOTOR	–	2	WIRE
⑦	WR7	REGULATOR	CN5324	⟷	PRE/REC MDA	CN5501	5	WIRE
⑧	WR8	REGULATOR	CN5323	⟷	DV MAIN	CN1001	10	WIRE
⑨	WR9	DRUM MOTOR	CON1	⟷	MAIN	CN3001	5	FPC
⑩	WR10	MAIN	CN1	⟷	UPPER DRUM	–	13	FPC
⑪	WR11	A/C HEAD	CN1	⟷	MAIN	CN2001	7	FPC
⑫	WR12	MAIN	CN3014	⟷	DV MAIN	CN1002	6	FPC
⑬	WR13	MAIN	CN703	⟷	DV MAIN	CN3501	6	WIRE
⑭	WR14	MAIN	CN2601	⟷	DV MAIN	CN3701	8	FPC
⑮	WR15	DV MAIN	CN1502	⟷	SENSOR	–	15	FPC
⑯	WR16	PRE/REC MDA	CN5002	⟷	DV MAIN	CN2001	26	FPC
⑰	WR17	PRE/REC MDA	CN5506	⟷	DV MAIN	CN1501	20	FPC
⑱	WR18	PRE/REC MDA	CN5507	⟷	DV HOUSING MOTOR	–	4	WIRE
⑲	WR19	PRE/REC MDA	CN5502	⟷	DV LOADING MOTOR	–	2	WIRE
⑳	WR20	PRE/REC MDA	CN5505	⟷	DV ENCODER	–	4	WIRE
㉑	WR21	PRE/REC MDA	CN5503	⟷	DV DRUM MOTOR	–	11	FPC
㉒	WR22	PRE/REC MDA	CN5504	⟷	DV CAPSTAN MOTOR	–	18	FPC
㉓	WR23	PRE/REC MDA	CN5001	⟷	DV VIDEO HEAD	–	10	FPC
㉔	–	MAIN	CN7506	⟷	S-SUB	CN512	14	FPC
–	–	DV MAIN	CN1101	⟷	Jig CONN. CABLE	–	26	–

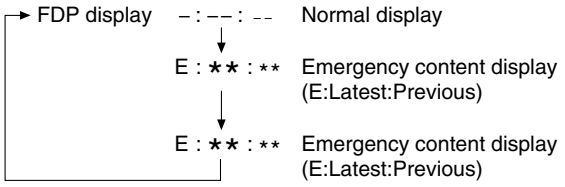
Table 1-10-1 Connection

1.11 EMERGENCY DISPLAY FUNCTION

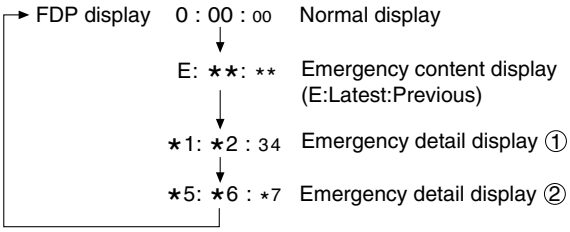
This unit has a function for storing the history of the past two emergencies (EMG) and displaying them on each FDP. With the status of the VCR and mechanism at the moment an emergency occurred can also be confirmed.

FDP display switching

[DV]



[VHS]



Notes:

- ***The emergency detail display ①② show the information on the latest emergency.***
  It becomes " – – : – – : – –" when there is no latest emergency record.
- ***When using the Jig RCU, set its custom code to match the custom code of the VCR.***

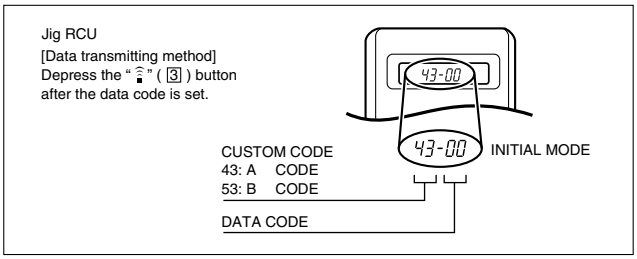
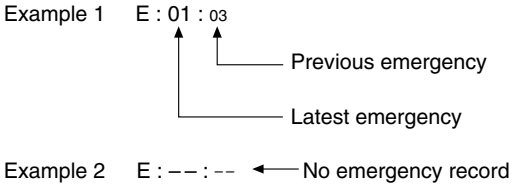


Fig. 1-11-1 Jig RCU [PTU94023B]

1.11.1 Displaying the emergency information

(1) Transmit the code "59" from the Jig RCU.
The FDP shows the emergency content in the form of "E:★★:★★".



Note:

[DV]

For the emergency content, see "1.11.3 Emergency content description".

[VHS]

For the emergency content, see "1.11.3 Emergency content description".

(2) Transmit the code "59" from the Jig RCU again.
The FDP shows the emergency detail information ① in the form of "★1 : ★2 : 34".

- ★1 : Deck operation mode at the moment of emergency
- ★2 : Mechanism operation mode at the moment of emergency
- 3– : Mechanism sensor information at the moment of emergency
- –4 : Mechanism mode position at the moment of emergency

Note:

- ***For the emergency detail information ①, see "1.11.4 Emergency detail information ①".***

(3) Transmit the code "59" from the Jig RCU once again.
The FDP shows the emergency detail information ② in the form of "★5 : ★6 : ★7".

- ★5 : Type of the cassette tape in use ①.
- ★6 : Winding position of the cassette tape in use
- ★7 : Type of the cassette tape in use ②(Winding area)

Note:

- ***For the emergency detail information ②, see "1.11.5 Emergency detail information ②".***

(4) Transmit the code "59" from the Jig RCU once again to reset the display.

1.11.2 Clearing the emergency history

(1) Display the emergency history.
(2) Transmit the code "36" from the Jig RCU.
(3) Reset the emergency display.

(Y292-03e)

1.11.3 Emergency content description

Note: ***Emergency contents "E08/E09" are for the model with Dynamic Drum (DD).***

FDP	CONTENT	CAUSE
E01: Loading EMG	When the mechanism mode cannot be changed to another mode even when the loading motor has rotated for more than 4 seconds in the loading direction, [E:01] is identified and the power is turned off.	① The mechanism is locked in the middle of mode transition. ② The mechanism is locked at the loading end due to the encoder position reading error during mode transition. ③ Power is not supplied to the loading MDA.
E02: Unloading EMG	When the mechanism mode cannot be changed to another mode even when the loading motor has rotated for more than 4 seconds in the unloading direction, [E:02] is identified and the power is turned off.	① The mechanism is locked in the middle of mode transition. ② The mechanism is locked at the unloading end due to the encoder position reading error during mode transition. ③ Power is not supplied to the loading MDA.
E03: Take Up Reel Pulse EMG	When the take-up reel pulse has not been generated for more than 4 seconds in the capstan rotating mode, [E:03] is identified, the pinch rollers are turned off and stopped, and the power is turned off. However, the reel EMG is not detected in STILL/SLOW modes.	① The take-up reel pulse is not generated in the FWD transport modes (PLAY/FWD SEARCH/FF, etc.) because; 1) The idler gear is not meshed with the take-up reel gear; 2) The idler gear is meshed with the take-up reel gear, but incapable of winding due to too large mechanical load (abnormal tension); 3) The take-up reel sensor does not output the FG pulse. ② The supply reel pulse is not generated in the REV transport modes (REV SEARCH/REW, etc.) because; 1) The idler gear is not meshed with the supply reel gear. 2) The idler gear is meshed with the supply reel gear, but incapable of winding due to too large a mechanical load (abnormal tension); 3) The supply reel sensor does not output the FG pulse. ③ Power is not supplied to the reel sensors.
E04: Drum FG EMG	When the drum FG pulse has not been input for more than 3 seconds in the drum rotating mode, [E:04] is identified, the pinch rollers are turned off and stopped, and the power is turned off.	① The drum could not start or the drum rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high; 2) The tape is damaged or a foreign object (grease, etc.) adheres to the tape. ② The drum FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (hall device) of the drum is faulty. ③ The drum control voltage (DRUM CTL V) is not supplied to the MDA. ④ Power is not supplied to the drum MDA.
E05: Cassette Eject EMG	When the eject operation does not complete in 3 seconds after the start, [E:05] is identified, the pinch rollers are turned off and stopped, and the power is turned off. When the cassette insertion operation does not complete in 3 seconds after the start, the cassette is ejected. In addition, when the operation does not complete within 3 seconds after the start, [E:05] is also identified and the power is turned off immediately.	① The cassette cannot be ejected due to a failure in the drive mechanism of the housing. ② When the housing load increases during ejection, the loading motor is stopped because of lack of headroom in its drive torque. Housing load increasing factors: Temperature environment (low temperature, etc.), mechanism wear or failure. ③ The sensor/switch for detecting the end of ejection are not functioning normally. ④ The loading motor drive voltage is lower than specified or power is not supplied to the motor (MDA). ⑤ When the user attempted to eject a cassette, a foreign object (or perhaps the user's hand) was caught in the opening of the housing.
E06: Capstan FG EMG	When the capstan FG pulse has not been generated for more than 1 second in the capstan rotating mode, [E:06] is identified, the pinch rollers are turned off and stopped, and the power is turned off.However, the capstan EMG is not detected in STILL/SLOW/FF/REW modes.	① The capstan could not start or the capstan rotation has stopped due to too large a load on the tape, because; 1) The tape tension is abnormally high (mechanical lock); 2) The tape is damaged or a foreign object (grease, etc.) is adhered to the tape (occurrence of tape entangling, etc.). ② The capstan FG pulse did not reach the System controller CPU because; 1) The signal circuit is disconnected in the middle; 2) The FG pulse generator (MR device) of the capstans is faulty. ③ The capstan control voltage (CAPSTAN CTL V) is not supplied to the MDA. ④ Power is not supplied to the capstan MDA.
E07: SW Power Short-Circuit EMG	When short-circuiting of the SW power supply with GND has lasted for 0.5 second or more, [E:07] is identified, all the motors are stopped and the power is turned off.	① The SW 5 V power supply circuit is shorted with GND. ② The SW 12 V power supply circuit is shorted with GND.
E08: DD Initialized (Absolute Position Sensor) EMG	When DD tilting does not complete in 4 seconds, [E:08] is identified, the tilt motor is stopped and the power is turned off.	① The absolute value sensor is defective. (The soldered parts have separated.) ② The pull-up resistor at the absolute sensor output is defective. (The soldered parts have separated.) ③ Contact failure or soldering failure of the pins of the connector (board-to-board) to the absolute value sensor. ④ The absolute value sensor data is not sent to the System Controller CPU.
E09: DD FG EMG	When the DD FG pulse is not generated within 2.5 seconds, [E:09] is identified, the tilt motor is stopped and the power is turned off.	① The FG sensor is defective. (The soldered parts have separated.) ② The pull-up resistor at the FG sensor output is defective. (The soldered parts have separated.) ③ Contact failure or soldering failure of the pins of the connector (board-to-board) to the FG sensor. ④ The power to the sensor is not supplied. (Connection failure/soldering failure) ⑤ The FG pulse is not sent to the System Controller CPU. ⑥ The tilt motor is defective. (The soldered parts have separated.) ⑦ The drive power to the tilt motor is not supplied. (Connection failure/soldering failure) ⑧ The tilt motor drive MDA - IC is defective. ⑨ Auto-recovery of the DD tilting cannot take place due to overrun.
E0A: Supply Reel Pulse EMG	When the supply reel pulse has not been generated for more than 10 seconds in the capstan rotating mode, [E:0A] is identified and the cassette is ejected (but the power is not turned off). However, note that the reel EMG is not detected in the SLOW/STILL mode.	① The supply reel pulse is not generated in the FWD transport mode (PLAY/FWD SEARCH/FF, etc.) because; 1) PLAY/FWD or SEARCH/FF is started while the tape in the inserted cassette is cut in the middle; 2) A mechanical factor caused tape slack inside and outside the supply reel side of the cassette shell. In this case, the supply reel will not rotate until the tape slack is removed by the FWD transport, so the pulse is not generated until then; 3) The FG pulse output from the supply reel sensor is absent. ② The take-up reel pulse is not generated in the REV transport mode (REV SEARCH/REW, etc.). 1) REV SEARCH/REW is started when the tape in the inserted cassette has been cut in the middle; 2) A mechanical factor caused tape slack inside and outside the take-up reel side of the cassette shell. In this case, the supply reel will not rotate until the tape slack is removed by the REV transport, so the pulse will not be generated until that time; 3) The FG pulse output from the take-up reel sensor is absent. ③ The power to a reel sensor is not supplied.
EC1 or EU1: Head clog warning	Presupposing the presence of the control pulse output in the PLAY mode, when the value obtained by mixing the two V.FM output channels (without regard to the A.FM output) has remained below a certain threshold level for more than 10 seconds, [E:C1] or [E:U1] is identified and recorded in the emergency history. During the period in which a head clog is detected, the FDP and OSD repeat the "3-second warning display" and "7-second noise picture display" alternately. EMG code : "E:C1" or "E:U1" / FDP : "U:01" / OSD : "Try cleaning tape." or "Use cleaning cassette." The head clog warning is reset when the above-mentioned threshold has been exceeded for more than 2 seconds or the mode is changed to another mode than PLAY.	

Table 1-11-1

1.11.4 Emergency detail information ①

The status (electrical operation mode) of the VCR and the status (mechanism operation mode/sensor information) of the mechanism in the latest emergency can be confirmed based on the figure in EMG detail information ①.

[FDP display]

∗1 : ∗2 : 34

∗1 : Deck operation mode at the moment of emergency
∗2 : Mechanism operation mode at the moment of emergency
3– : Mechanism sensor information at the moment of emergency
–4 : Mechanism mode position at the moment of emergency

Note:

- ***In the Deck operation mode/Mechanism operation mode/ Mechanism mode position, the contents of the code that is shown on the FDP differs depending on the parts number of the System Control microprocessor (IC3001) of the VCR.***
  For the microprocessor parts number that starts with the two letters "MN", refer to the Table of MN and for parts number with "HD", refer to the Table of HD.

∗1 : Deck Operation Mode
[Table of MN]

Display	Deck Operation Mode
00	Mechanism being initialized
01	STOP with pinch roller pressure off (or tape present with P.OFF)
02	STOP with pinch roller pressure on
03	POWER OFF as a result of EMG
04	PLAY
0C	REC
10	Cassette ejected
20	FF
21	Tape fully loaded, START sensor ON, short FF
22	Cassette identification FWD SEARCH before transition to FF (SP x7-speed)
24	FWD SEARCH (variable speed) including x2-speed
2C	INSERT REC
40	REW
42	Cassette identification REV SEARCH before transition to REW (SP x7-speed)
44	REV SEARCH (variable speed)
4C	AUDIO DUB
6C	INSERT REC (VIDEO + AUDIO)
84	FWD STILL/SLOW
85	REV STILL/SLOW
8C	REC PAUSE
8D	Back spacing
8E	Forward spacing (FWD transport mode with BEST function)
AC	INSERT REC PAUSE
AD	INSERT REC Back spacing
CC	AUDIO DUB PAUSE
CD	AUDIO DUB Back spacing
EC	INSERT REC (VIDEO + AUDIO) PAUSE
ED	INSERT REC (VIDEO + AUDIO) Back spacing

[Table of HD]

Display	Deck Operation Mode
00	STOP with pinch roller pressure off (or tape present with P.OFF)
01	STOP with pinch roller pressure on
04	PLAY
0E	REC
11	Cassette ejected
22	FF
26	FWD SEARCH (variable speed) including x2-speed
2E	INSERT REC
43	REW
47	REV SEARCH (variable speed)
4C	AUDIO DUB
6E	INSERT REC (VIDEO+AUDIO)
84	FWD STILL/SLOW
85	REV STILL/SLOW
8F	REC PAUSE
AF	INSERT REC PAUSE
CD	AUDIO DUB PAUSE
EF	INSERT REC (VIDEO+AUDIO) PAUSE

∗2 : Mechanism Operation Mode
[Table of MN]

Display	Mechanism Operation Mode
00	Command standby (Status without executing command)
02	POWER OFF by EMG occurrence
04	Moving to the adjacent position in the LOAD direction
06	Moving to the adjacent position in the UNLOAD direction
08	Cassette ejection being executed
0A	Cassette insertion being executed
0C	Tape being loaded
0E	Tape being unloaded
10	Mode transition to STOP with pinch roller compression ON
12	Mode transition to STOP with pinch roller compression OFF
14	Mode transition to STOP with pinch roller compression OFF as a result of POWER OFF
16	Mode transition to STOP with pinch roller compression ON as a result of POWER ON
18	Mode transition to PLAY
1A	Mode transition to FWD SEARCH
1C	Mode transition to REC
1E	Mode transition to FWD STILL/SLOW
20	Mode transition to REV STILL/SLOW
22	Mode transition to REV SEARCH
24	Mode transition from FF/REW to STOP
26	Mode transition to FF
28	Mode transition to REW
2A	4 sec. of REV as a result of END sensor going ON during loading
2C	Short FF/REV as a result of tape sensor going ON during unloading
2E	Mechanism position being corrected due to overrun
80	Mechanism in initial position (Dummy command)

[Table of HD]

Display	Mechanism Operation Mode
00	STOP with pinch roller pressure off
01	STOP with pinch roller pressure on
02	U/L STOP (or tape being loaded)
04	PLAY
05	PLAY (x1-speed playback using JOG)
0E	REC
11	Cassette ejected
22	FF
26	FWD SEARCH (variable speed) including x2-speed
2E	INSERT REC
43	REW
47	REV SEARCH
4C	AUDIO DUB
6E	INSERT REC (VIDEO + AUDIO)
84	FWD STILL/SLOW
85	REV STILL/SLOW
8F	REC PAUSE
AF	INSERT REC PAUSE
C7	REV SEARCH (x1-speed reverse playback using JOG)
CD	AUDIO DUB PAUSE
EF	INSERT REC (VIDEO + AUDIO) PAUSE
F0	Mechanism being initialized
F1	POWER OFF as a result of EMG
F2	Cassette being inserted
F3	Cassette being ejected
F4	Transition from STOP with pinch roller pressure on to STOP with pinch roller pressure off
F5	Transition from STOP with pinch roller pressure on to PLAY
F6	Transition from STOP with pinch roller pressure on to REC
F7	Cassette type detection SEARCH before FF/REW is being executed
F8	Tape being unloaded
F9	Transition from STOP with pinch roller pressure off to STOP with pinch roller pressure on
FA	Transition from STOP with pinch roller pressure off to FF/REW
FB	Transition from STOP with pinch roller pressure off to REC.P (T.REC,etc.)
FC	Transition from STOP with pinch roller pressure off to cassette type detection SEARCH
FD	Short REV being executed after END sensor on during unloading
FE	Tension loosening being executed after tape loading (STOP with pinch roller pressure on)

3– : Mechanism Sensor Information
[Common table of MN and HD]

Display	Mechanism Sensor Information			
	S-VHS SW	REC SAFETY SW	START SENSOR	END SENSOR
0–	VHS	Tab broken	ON	ON
1–	VHS	Tab broken	ON	OFF
2–	VHS	Tab broken	OFF	ON
3–	VHS	Tab broken	OFF	OFF
4–	VHS	Tab present	ON	ON
5–	VHS	Tab present	ON	OFF
6–	VHS	Tab present	OFF	ON
7–	VHS	Tab present	OFF	OFF
8–	S-VHS	Tab broken	ON	ON
9–	S-VHS	Tab broken	ON	OFF
A–	S-VHS	Tab broken	OFF	ON
B–	S-VHS	Tab broken	OFF	OFF
C–	S-VHS	Tab present	ON	ON
D–	S-VHS	Tab present	ON	OFF
E–	S-VHS	Tab present	OFF	ON
F–	S-VHS	Tab present	OFF	OFF

–4 : Mechanism Mode Position
[Table of MN]

Display	Mechanism Mode Position
-0	Initial value
-1	EJECT position
-2	Housing operating
-3	U/L STOP position
-4	Tape being loaded/unloaded (When the pole base is located on the front side of the position just beside the drum)
-5	Tape being loaded/unloaded (When the pole base is located on the rear side of the position just beside the drum)
-6	Pole base compressed position
-7	FF/REW position
-8	Between FF/REW and STOP with pinch roller compression ON
-9	STOP with pinch roller compression OFF
-A	Between STOP with pinch roller compression OFF and REV
-B	REV (REV STILL/SLOW) position
-C	Between REV and FWD
-D	FWD (FWD STILL/SLOW) position
-E	Between FWD and PLAY
-F	PLAY position

[Table of HD]

Display	Mechanism Mode Position
–0	EJECT position
–1	U/L STOP position
–2	Tape being loaded/unloaded (When the pole base is located on the rear side of the position just beside the drum)
–3	FF/REW position
–4	STOP with pinch roller pressure off
–5	REV (REV STILL/SLOW) position
–6	FWD (FWD STILL/SLOW) position, PLAY position
–7	Intermediate position during transition between other mechanism modes

Note:
- ***As the display is always "–7" at any intermediate position between mechanism modes, the position of transitory EMG may sometimes not be locatable.***

1.11.5 Emergency detail information ②

The type of the cassette tape and the cassette tape winding position can be confirmed based on the figure in EMG detail information ②.

[FDP display]

∗5 : ∗6 : ∗7

∗5 : Type of the cassette tape in use ①
∗6 : Winding position of the cassette tape in use
∗7 : Type of the cassette tape in use ②(Winding area)

Note:
- ***EMG detail information② is the reference information stored using the remaining tape detection function of the cassette tape. As a result, it may not identify cassette correctly when a special cassette tape is used or when the tape has variable thickness.***

∗5 : Cassette tape type ①

Display	Cassette Tape Type ①
00	Cassette type not identified
16	Large reel/small reel (T-0 to T-15/T-130 to T-210) not classified
82	Small reel, thick tape (T-120) identified/thin tape (T-140) identified
84	Large reel (T-0 to T-60) identified
92	Small reel, thick tape (T-130) identified/thin tape (T-160 to T-210) identified
93	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) not classified
C3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
D3	Small reel, thick tape/C cassette (T-0 to T-100/C cassette) being classified
E1	C cassette, thick tape (TC-10 to TC-20) identified
E2	Small reel, thick tape (T-0 to T-100) identified
E9	C cassette, thin tape (TC-30 to TC-40) identified
F1	C cassette, thick tape/thin tape (TC-10 to TC-40) not classified

Notes:
- ***Cassette tape type ① is identified a few times during mode transition and the identification count is variable depending on the cassette tape type. If an EMG occurs in the middle of identification, the cassette tape type may not be able to be identified.***
- ***If other value than those listed in the above table is displayed, the cassette tape type is not identified.***

∗6 : Cassette tape winding position

The cassette tape winding position at the moment of EMG is displayed by dividing the entire tape (from the beginning to the end) in 22 sections using a hex number from "00" to "15".

"00" : End of winding
"15" : Beginning of winding
"FF" : Tape position not identified

∗7 : Cassette tape type ② (Winding area)

Display	Cassette Tape Type ②	
00	Cassette type not identified	
07	Small reel, thick tape	T-5
08 - 0E	C cassette, thick tape	TC-10
09 - 15	C cassette, thick tape	TC-20P
0A - 0B	Small reel, thick tape	T-20
0A - 16	C cassette, thin tape	TC-30
0A - 16	C cassette, thin tape	TC-40
0D - 0F	Small reel, thick tape	T-40
11 - 14	Small reel, thick tape	T-60
15 - 18	Small reel, thick tape	T-80/DF-160
17 - 1A	Small reel, thick tape	T-80/DF-180
19 - 1D	Small reel, thick tape	T-100
1D - 21	Small reel, thick tape	T-120/DF-240
1E - 1F	Small reel, thin tape	T-140
1F - 23	Small reel, thick tape	T-130
21 - 23	Small reel, thin tape	T-160
21 - 23	Small reel, thin tape	T-168
22 - 24	Small reel, thick tape	DF-300
22 - 24	Small reel, thin tape	T-180/DF-380
22 - 24	Small reel, thin tape	T-210/DF-420
22 - 23	Large reel	T-5
23 - 24	Large reel	T-10
25 - 26	Large reel	T-20
27 - 29	Large reel	T-30
29 - 2B	Large reel	T-40
2D - 2F	Large reel	T-60

Note:
- ***The values of cassette tape type ② in the above table are typical values with representative cassette tapes.***

SECTION 2
MECHANISM ADJUSTMENT (VHS)

2.1 BEFORE STARTING REPAIR AND ADJUSTMENT

2.1.1 Precautions

(1) Unplug the power cable of the main unit before using your soldering iron.
(2) Take care not to cause any damage to the conductor wires when plugging and unplugging the connectors.
(3) Do not randomly handle the parts without identifying where the trouble is.
(4) Exercise enough care not to damage the lugs, etc. during the repair work.
(5) When installing the front panel assembly, be sure to hook the lug on the back side of the cassette door to the door opener of the cassette holder. If this operation is neglected it will not be possible to remove the cassette when ejecting because the housing door cannot be opened.

2.1.2 Checking for Proper Mechanical Operations

Enter the mechanism service mode when you want to operate the mechanism when no cassette is loaded. (See 1.5 MECHANISM SERVICE MODE.)

2.1.3 Manually Removing the Cassette Tape

1. In case of electrical failures

If you cannot remove the cassette tape which is loaded because of any electrical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, bracket and front panel assembly. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
(2) Unload the cassette by manually turning the loading motor of the mechanism assembly toward the front. In doing so, hold the tape by the hand to keep the slack away from any grease. (See Fig.2-1-3a.)
(3) Bring the pole base assembly (supply or take-up side) to a pause when it reaches the position where it is hidden behind the cassette tape.
(4) Move the top guide toward the drum while holding down the lug Ⓐ of the bracket retaining the top guide. Likewise hold part Ⓑ down and remove the top guide. Section Ⓒ of the top guide is then brought under the cassette lid. Then remove the top guide by pressing the whole cassette tape down. (See Fig.2-1-3b.)
(5) Remove the cassette tape by holding both the slackened tape and the cassette lid.
(6) Take up the slack of the tape into the cassette. This completes removal of the cassette tape.

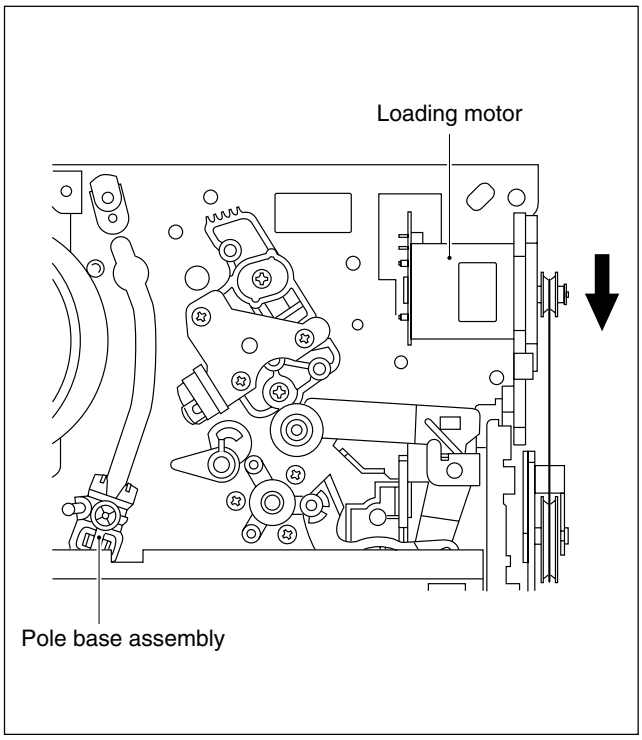


Fig. 2-1-3a

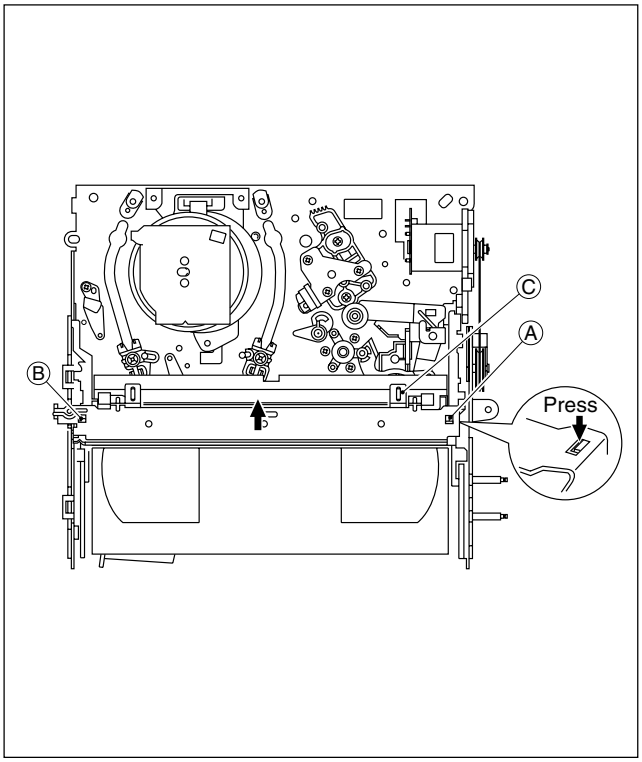


Fig. 2-1-3b

2. In case of mechanical failure

If you cannot remove the cassette tape which is loaded because of any mechanical failure, manually remove it by taking the following steps.

(1) Unplug the power cable and remove the top cover, front panel assembly and others so that the mechanism assembly is visible. (See 1.3 DISASSEMBLY/ASSEMBLY METHOD.)
(2) While keeping the tension arm assembly of the mechanism assembly free from tension, pull the tape on the pole base assembly (supply or take-up side) out of the guide roller. (See Fig.2-1-3c.)
(3) Take the spring of the pinch roller arm assembly off the hook of the press lever assembly, and detach it from the tape. (See Fig.2-1-3d.)
(4) In the same way as in the electrical failure instructions in 2.1.3-1(4), remove the top guide.
(5) Raise the cassette tape cover. By keeping it in that position, draw out the cassette tape case from the cassette holder and take out the tape.
(6) By hanging the pinch roller arm assembly spring back on the hook, take up the slack of the tape into the cassette.

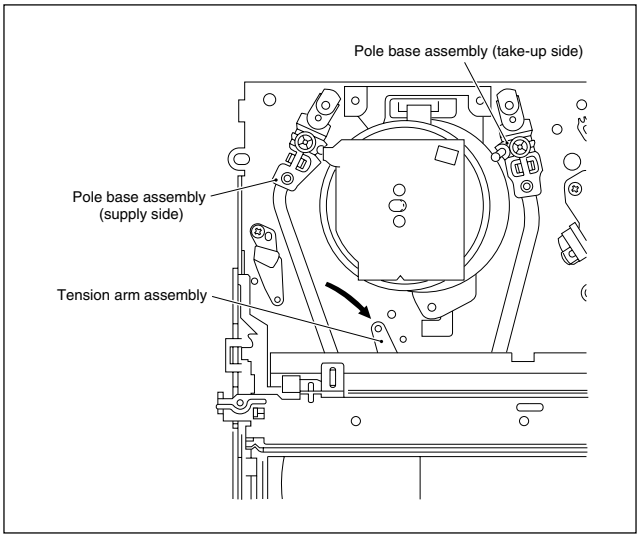


Fig. 2-1-3c

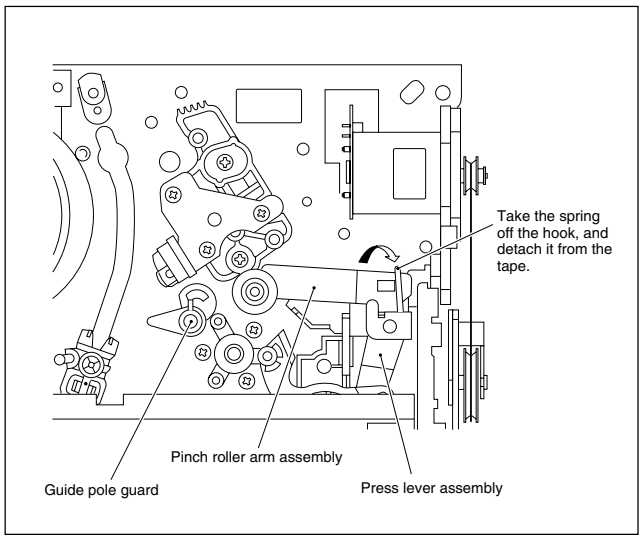
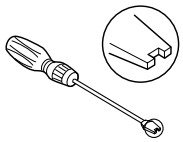
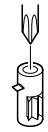
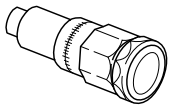
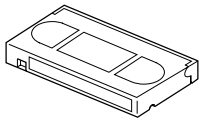
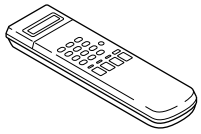
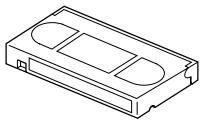
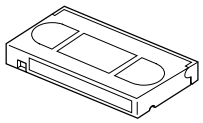


Fig. 2-1-3d

2.1.4 Jigs and Tools Required for Adjustment

Roller driver PTU94002	A/C head positioning tool PTU94010	Torque gauge PUJ48075-2
		
Back tension cassette gauge PUJ48076-2	**Jig RCU PTU94023B**	
		
Alignment tape (SP, stairstep, NTSC) MHP	**Alignment tape (LP, stairstep, NTSC) MHP-L**	
		

2.1.5 Maintenance and Inspection

1. Location of major mechanical parts

In this chapter, the two mechanism speeds are described by comparing the speeds of the standard type and the high-speed FF/REW type.
It is possible to distinguish between these two types of mechanism by the diameters of their capstan pulleys.
The capstan pulley diameter for the standard type is approx. 32 mm.
The capstan pulley diameter for the high-speed FF/REW type is approx. 43 mm.
For information on the different parts used in the two mechanism types, please refer to the “Replacement of major parts”.

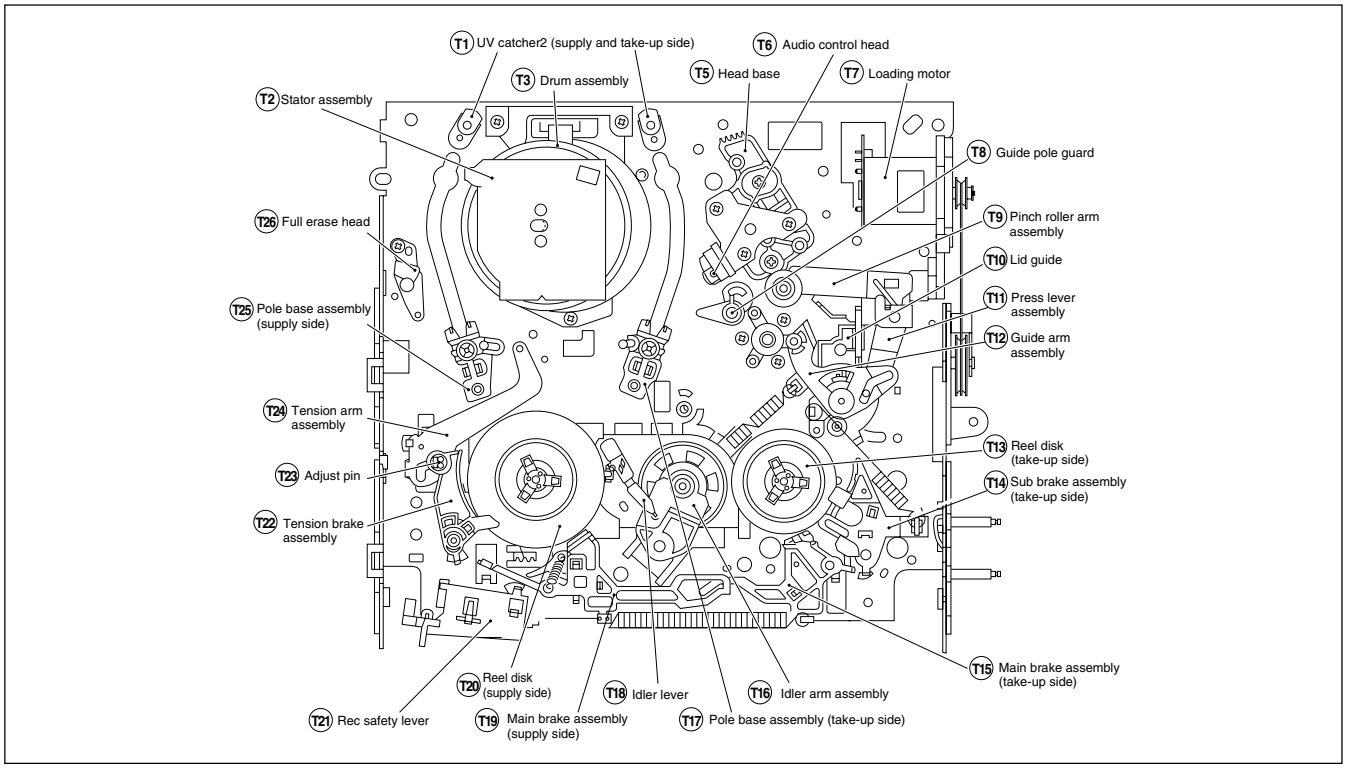

T1 UV catcher2 (supply and take-up side)
T6 Audio control head
T3 Drum assembly
T5 Head base
T7 Loading motor
T2 Stator assembly
T8 Guide pole guard
T26 Full erase head
T9 Pinch roller arm assembly
T10 Lid guide
T25 Pole base assembly (supply side)
T11 Press lever assembly
T12 Guide arm assembly
T24 Tension arm assembly
T13 Reel disk (take-up side)
T23 Adjust pin
T14 Sub brake assembly (take-up side)
T22 Tension brake assembly
T15 Main brake assembly (take-up side)
T20 Reel disk (supply side)
T18 Idler lever
T16 Idler arm assembly
T21 Rec safety lever
T19 Main brake assembly (supply side)
T17 Pole base assembly (take-up side)

Fig. 2-1-5a Mechanism assembly top side

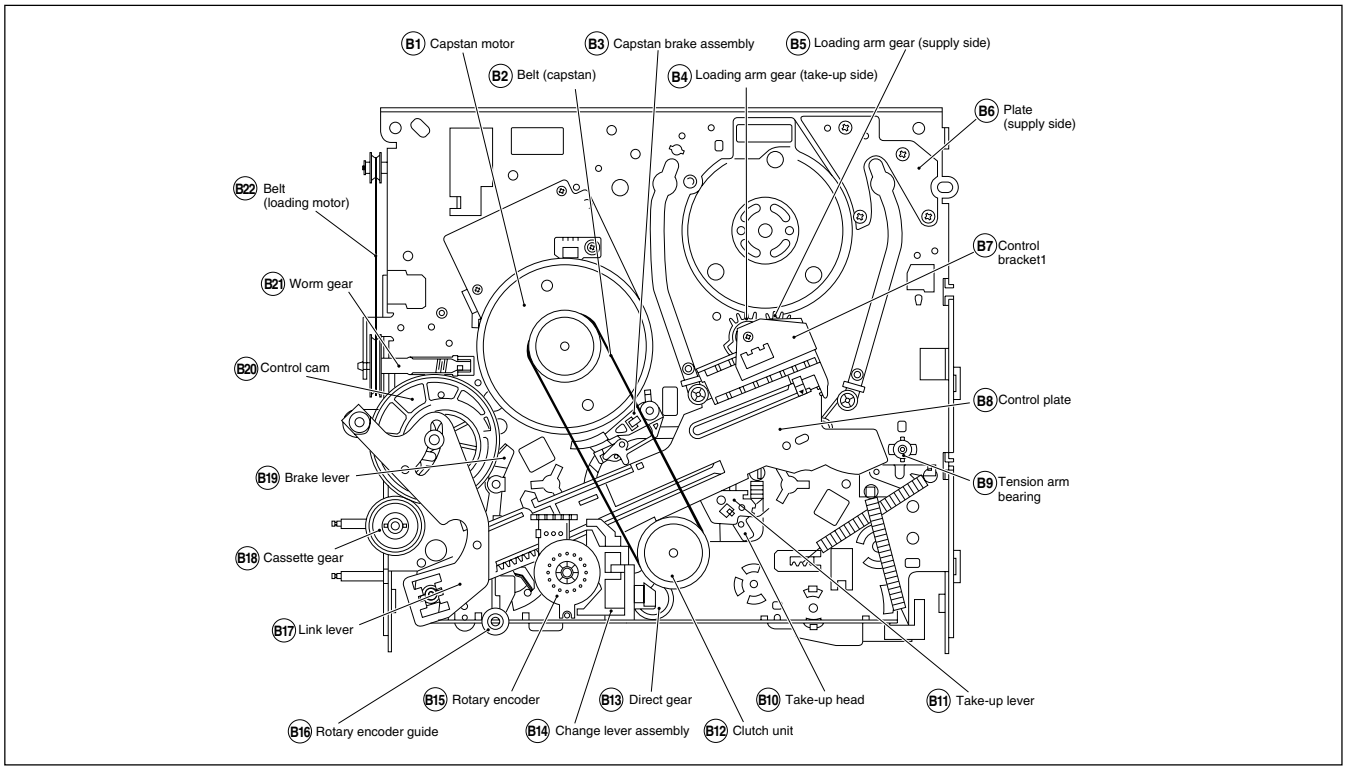


Fig. 2-1-5b Mechanism assembly bottom side

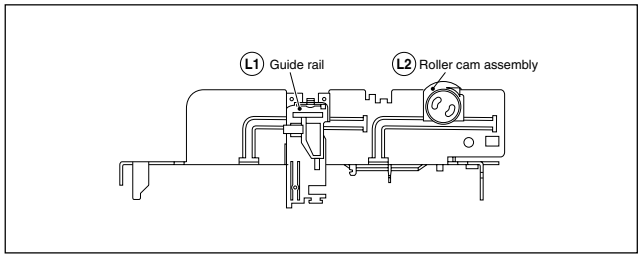


Fig. 2-1-5c Mechanism assembly left side

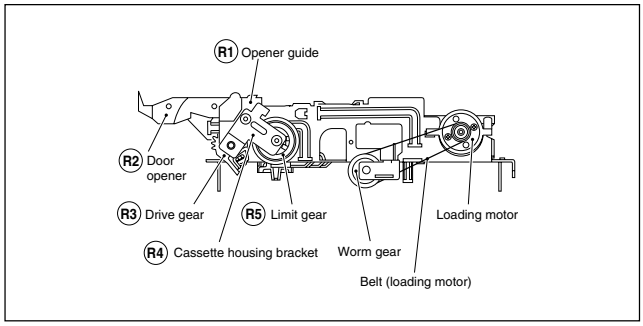


Fig. 2-1-5d Mechanism assembly right side

2. Cleaning

Regular cleaning of the transport system parts is desirable but practically impossible. So make it a rule to carry out cleaning of the tape transport system whenever the machine is serviced.

When the video head, tape guide and/or brush get soiled, the playback picture may appear inferior or at worst disappear, resulting in possible tape damage.

(1) When cleaning the upper drum (especially the video head), soak a piece of closely woven cloth or Kimu-wipe with alcohol and while holding the cloth onto the upper drum by the fingers, turn the upper drum counterclockwise.

Note:

- ***Absolutely avoid sweeping the upper drum vertically as this will cause damage to the video head.***

(2) To clean the parts of the tape transport system other than the upper drum, use a piece of closely woven cloth or a cotton swab soaked with alcohol.

(3) After cleaning, make sure that the cleaned parts are completely dry before using the video tape.

3. Lubrication

With no need for periodical lubrication, you have only to lubricate new parts after replacement. If any oil or grease on contact parts is soiled, wipe it off and newly lubricate the parts.

Note:

- ***See the "mechanism assembly" diagram of the parts list for the lubricating or greasing spots, and for the types of oil or grease to be used.***

4. Suggested servicing schedule for main components

The following table indicates the suggested period for such service measures as cleaning,lubrication and replacement. In practice, the indicated periods will vary widely according to environmental and usage conditions.However, the indicated components should be inspected when a set is brought for service and the maintenance work performed if necessary. Also note that rubber parts may deform in time,even if the set is not used.

System	Parts Name	Operation Hours	
		~1000H	~2000H
Tape transport	Upper drum assembly	★○	○
	A/C head	★○	★○
	Lower drum assembly	★	★○
	Pinch roller arm assembly	★	★
	Full erase head	★	★
	Tension arm assembly	★	★
	Capstan motor (Shaft)	★	★
	Guide arm assembly	★	★
Drive	Capstan motor		○
	Capstan brake assembly		○
	Main brake assembly		○
	Belt (Capstan)	○	○
	Belt (Loading motor)		○
	Loading motor		○
	Clutch unit		○
	Worm gear		○
	Control plate		○
Other	Brush	★○	★○
	Tension brake assembly	○	○
	Rotary encoder		○

★ : Cleaning

○ : Inspection or Replacement if necessary

Table 2-1-5a

5. Disassembling procedure table

The following table indicates the order in which parts are removed for replacement. To replace parts, remove them in the order of 1 to 18 as shown in the table. To install them, reverse the removal sequence.

The symbols and numbers preceding the individual part names represent the numbers in the "Location of major mechanical parts" table. Also, the "T", "B", and "T/B" on the right of each part name shows that the particular part is removed from the front, from the back, and from both sides of the mechanism, respectively.

Symbols and numbers	Removal parts / (Reference items) Replacement parts	Front (T)/Back (B) of mechanism	Number of removal steps	L1 Guide rail	L2 Roller cam assembly	R4 Cassette housing bracket	R1 Opener guide	— Relay gear	— Cassette holder assembly	R3 Drive gear	— Drive arm	T9 Pinch roller arm assembly	T12 Guide arm assembly	T11 Press lever assembly	T1 UV catcher2	B15 Rotary encoder	B12 Clutch unit	B14 Change lever assembly	B13 Direct gear	— Coupling gear	B17 Link lever	B21 Worm gear	B7 Control bracket1	B8 Control plate	B5 Loading arm gear (supply side)	B4 Loading arm gear (take-up side)	B11 Take-up lever	T14 Sub brake assembly (take-up side)	T15 Main brake assembly (take-up side)	T13 Reel disk (take-up side)	T22 Tension brake assembly	T24 Tension arm assembly	T18 Idler lever	B19 Brake lever (*1)
L1	2.2.3 Guide rail	T	1																															
L2	2.2.3 Roller cam assembly	T	1																															
R4	2.2.3 Cassette housing bracket	T	1																															
R1	2.2.3 Opener guide	T	2			1																												
R2	2.2.3 Door opener	T	3			1	2																											
—	2.2.3 Relay gear	T	3			1	2																											
R5	2.2.3 Limit gear	T	3			1	2																											
—	2.2.3 Cassette holder assembly	T	6	1	2	3	4	5																										
R3	2.2.3 Drive gear	T	4			1	2	3																										
—	2.2.3 Drive arm	T	8	1	2	3	4	5	6	7																								
T9	2.2.4 Pinch roller arm assembly	T	1																															
T12	2.2.5 Guide arm assembly	T	1																															
T11	2.2.5 Press lever assembly	T	3									1	2																					
T6	2.2.6 A/C head	T	1																															
T7	2.2.7 Loading motor	T	1																															
B1	2.2.8 Capstan motor	T/B	1																															
T1	2.2.9 UV catcher2	T	1																															
T17	2.2.9 Pole base assembly (take-up side)	T/B	2												1																			
T25	2.2.9 Pole base assembly (supply side)	T/B	2												1																			
B15	2.2.10 Rotary encoder	B	1																															
B12	2.2.11 Clutch unit	B	1																															
B14	2.2.12 Change lever assembly	B	3													1	2																	
B13	2.2.12 Direct gear	B	4													1	2	3																
—	2.2.12 Coupling gear	B	5													1	2	3	4															
—	2.2.12 Clutch gear	B	6													1	2	3	4	5														
B17	2.2.13 Link lever	B	1																															
B18	2.2.14 Cassette gear	B	2																		1													
B20	2.2.14 Control cam	B	2																		1													
B21	2.2.14 Worm gear	B	1																															
T10	- Lid guide	T/B	5									1	2	3								4												
B7	2.2.15 Control bracket1	B	1																															
B8	2.2.15 Control plate	B	6													1	2	3			4		5											
B5	2.2.16 Loading arm gear (supply side)	B	7													1	2	3			4		5	6										
B4	2.2.16 Loading arm gear (take-up side)	B	8													1	2	3			4		5	6	7									
—	2.2.16 Loading arm gear shaft	B	9													1	2	3			4		5	6	7	8								
B11	2.2.17 Take-up lever	T/B	7													1	2	3			4		5	6										
B10	2.2.17 Take-up head	T/B	8													1	2	3			4		5	6			7							
—	2.2.17 Control plate guide	T/B	8													1	2	3			4		5	6			7							
B3	2.2.18 Capstan brake assembly	T/B	7													1	2	3			4		5	6										
T14	2.2.19 Sub brake assembly(take-up side)	T/B	15	1	2	3	4	5	6	7	8					9	10	11			12		13	14										
T15	2.2.20 Main brake assembly(take-up side)	T/B	16	1	2	3	4	5	6	7	8					9	10	11			12		13	14				15						
T19	2.2.20 Main brake assembly(supply side)	T/B	9	1	2	3	4	5	6	7	8																							
T13	2.2.20 Reel disk (take-up side)	T/B	16	1	2	3	4	5	6	7	8					9	10	11			12		13	14				15						
T22	2.2.21 Tension brake assembly	T/B	9	1	2	3	4	5	6	7	8																							
T20	2.2.21 Reel disk (supply side)	T/B	10	1	2	3	4	5	6	7	8																					9		
T24	2.2.21 Tension arm assembly	T/B	10	1	2	3	4	5	6	7	8																					9		
B9	2.2.21 Tension arm bearing	T/B	10	1	2	3	4	5	6	7	8																					9		
T18	2.2.22 Idler lever	T/B	17	1	2	3	4	5	6	7	8					9	10	11			12		13	14								15	16	
T16	2.2.22 Idler arm assembly	T/B	18	1	2	3	4	5	6	7	8					9	10	11			12		13	14								15	16	17
B19	- Brake lever (*1)	T/B	18	1	2	3	4	5	6	7	8					9	10	11			12		13	14				15	16	17				
B16	- Rotary encoder guide	T/B	19	1	2	3	4	5	6	7	8					9	10	11			12		13	14				15	16	17				18

Table 2-1-5b

Note:

- ***The parts with marked (∗) have different types of mechanisms (standard type or high-speed FF/REW type).***
  - ***∗1 : Uses the standard type mechanism only.***
  - ***∗2 : Uses the high-speed FF/REW type mechanism only.***

2.2 REPLACEMENT OF MAJOR PARTS

2.2.1 Before Starting Disassembling (Phase matching between mechanical parts)

The mechanism of this unit is closely linked with the rotary encoder and system controller circuits.
Since the system controller detects the status of mechanical operation in response to phases of the rotary encoder (internal switch positions), the mechanism may not operate properly unless such parts as the rotary encoder, control plate, loading arm gear, control cam, cassette gear, limit gear, relay gear and drive gear are installed in their correct positions.
Especially, this model is not provided with any cassette housing assembly, so that cassette loading and unloading must be accomplished by operation of the cassette holder assembly. The latter is in turn driven by such parts as the drive gear, relay gear and limit gear. Exercise enough care, therefore, to have the phases of all this gear matching one another. (For information on phase matching of the mechanism, see the instructions on how to install individual parts.)
This unit is provided with a mechanism assembly mode. It is therefore necessary to enter this mode for assembling and disassembling procedures.
This mode is usually not in use, manually set it when it is required.

2.2.2 How to Set the Mechanism Assembling Mode

Remove the mechanism assembly and place it bottom side up. (See SECTION 1 DISASSEMBLY.) Turn the worm gear toward the front so that the guide hole of the control cam is brought into alignment with the hole at the mechanism assembly chassis. This position renders the mechanism assembling mode operational. Make sure that the control plate is located in alignment with the mark E. (See Fig.2-2-2a.)

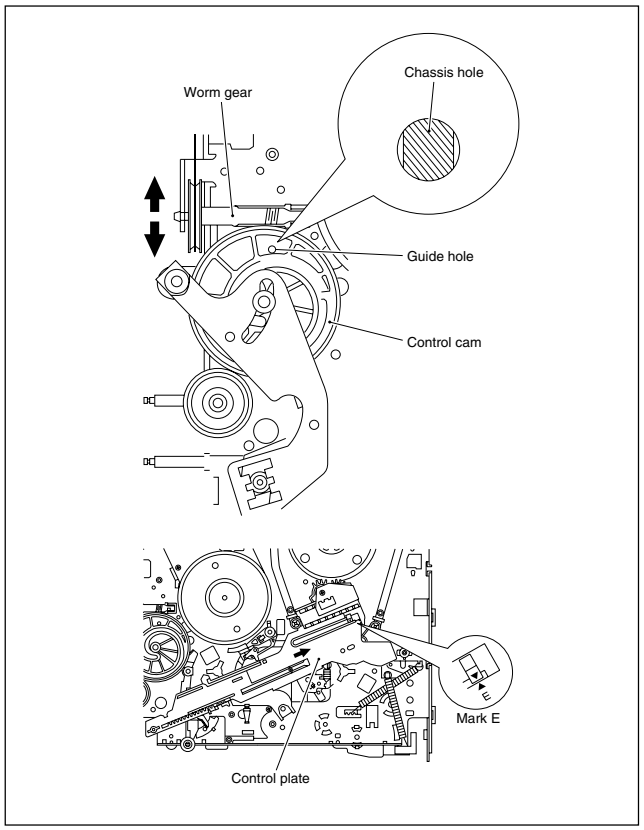


Fig. 2-2-2a

2.2.3 Cassette Holder Assembly

1. How to remove

(1) Remove the guide rail and roller cam assembly. (See Fig.2-2-3a.)
(3 lugs on the guide rail and one lug on the roller cam assembly)

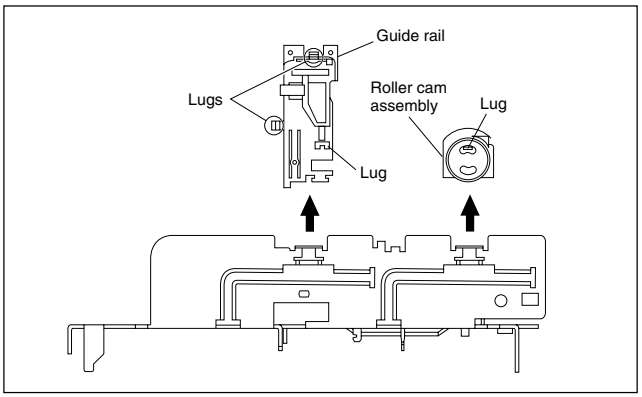


Fig. 2-2-3a

(2) Remove the two slit washers and remove the cassette housing bracket. (See Fig.2-2-3b.)
(3) Remove the opener guide, spring(A), door opener, relay gear and limit gear. (See Fig.2-2-3b.)

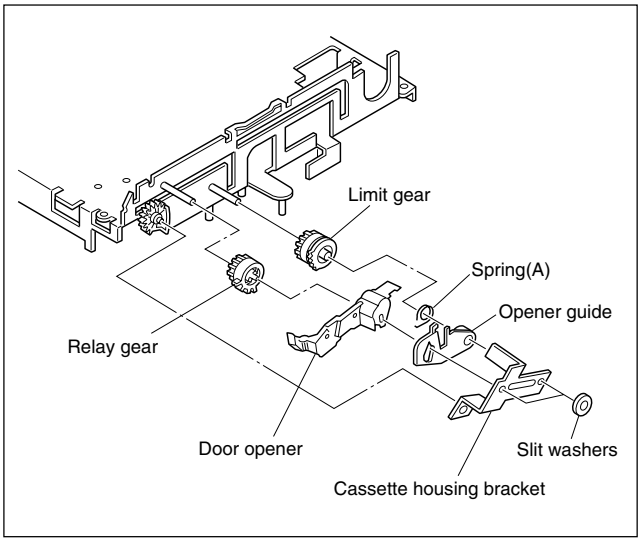


Fig. 2-2-3b

(4) While swinging the lock levers (R) and (L) of the cassette holder assembly toward the front, slide the cassette holder assembly until its legs come to where the guide rail and the roller cam assembly have been removed (so that the drive arm is upright). (See Fig.2-2-3c.)

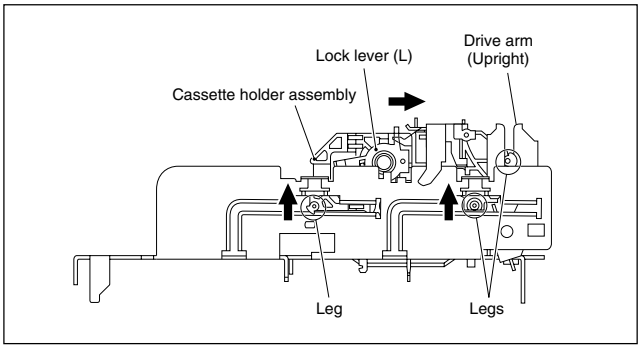


Fig. 2-2-3c

(5) While holding the left side of the cassette holder, lift the cassette holder assembly so that the three legs on the left side are all released. Then pull the legs Ⓐ and Ⓑ on the right side out of the rail and also pull up the leg Ⓒ. (See Fig.2-2-3d and Fig.2-2-3e.)
(6) Draw out the drive gear, and remove the drive arm.

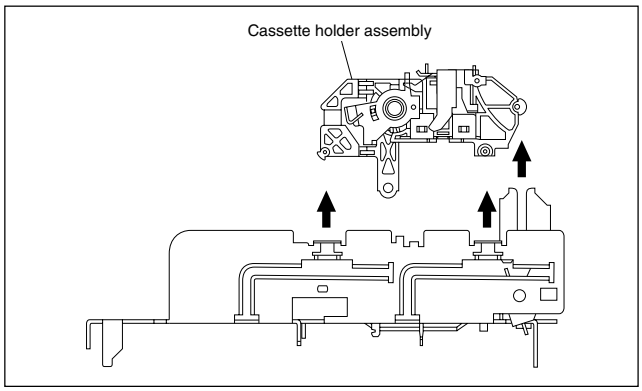


Fig. 2-2-3d

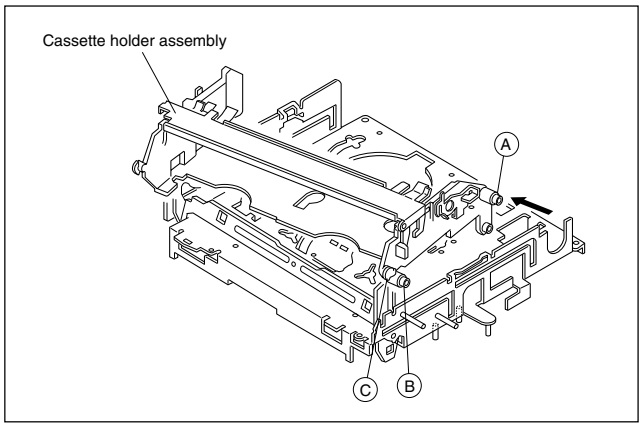


Fig. 2-2-3e

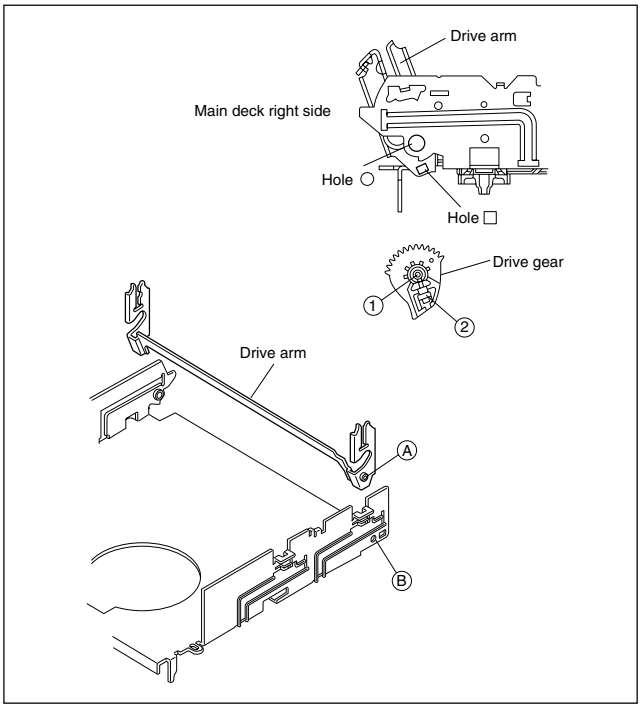


Fig. 2-2-3f

2. How to install (Phase matching)

(1) Insert the section Ⓐ of the drive arm into the section Ⓑ of the main deck.
(2) Insert the section ① of the drive gear into the round hole, and the section ② into the square hole on the drive arm. (See Fig.2-2-3f.)
(3) Hold the drive arm upright and fit the leg Ⓒ on the right side of the cassette holder assembly into the groove. (See Fig.2-2-3g.)
(4) While swinging the lock lever (R) of the cassette holder assembly toward the front, put the legs Ⓐ and Ⓑ into the rail. (See Fig.2-2-3g.)
(5) Drop the three legs on the left side of the cassette holder assembly into the groove at one time. (See Fig.2-2-3h.)
(6) Slide the whole cassette holder assembly toward the front to bring it to the eject end position.
(7) Install the limit gear so that the notch on the outer circumference of the limit gear is brought into alignment with the guide hole on the main deck. (See Fig.2-2-3i.)
(8) Install so that the notch on the periphery of the relay gear is aligned with the notch of the main deck and that hole A of the relay gear is aligned with the hole A of the limit gear and that hole B of the relay gear is aligned with the hole B of the drive gear. (See Fig.2-2-3i.)
(9) Install the door opener, opener guide, spring(A) and cassette housing bracket and fasten the two slit washers.

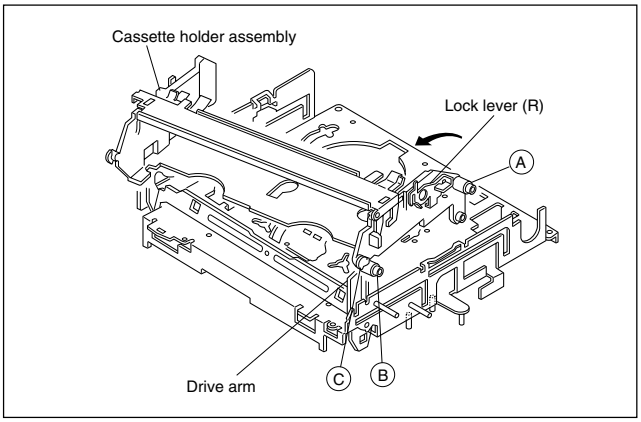


Fig. 2-2-3g

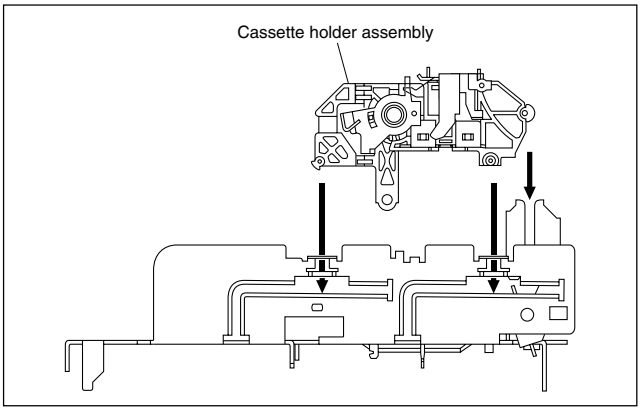


Fig. 2-2-3h

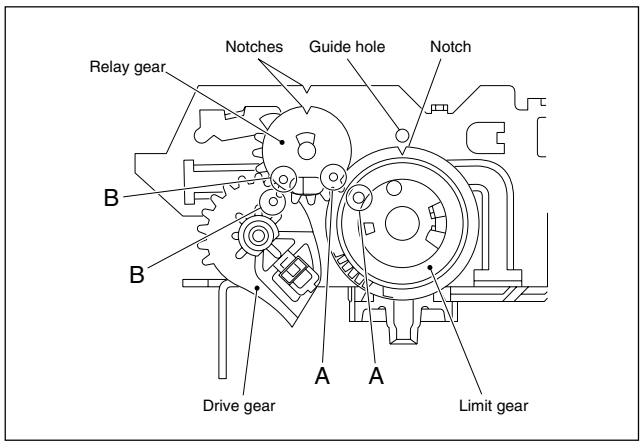


Fig. 2-2-3i

2.2.4 Pinch Roller Arm Assembly

1. How to remove

(1) Remove the spring from the hook of the press lever assembly.
(2) Remove the slit washer and remove the pinch roller seat 2. (See Fig.2-2-4a.)
(3) Remove the pinch roller arm assembly by pulling it up.

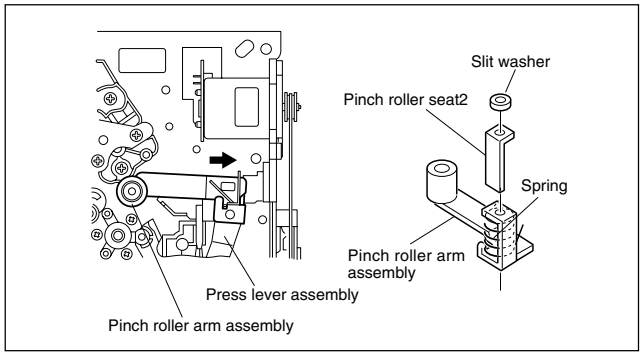


Fig. 2-2-4a

2.2.5 Guide Arm Assembly and Press Lever Assembly

1. How to remove

(1) Remove the spring and expand the lug of the lid guide in the arrow-indicated direction. Then remove the guide arm assembly by pulling it up.
(2) Remove the press lever assembly by pulling it up. (See Fig.2-2-5a.)

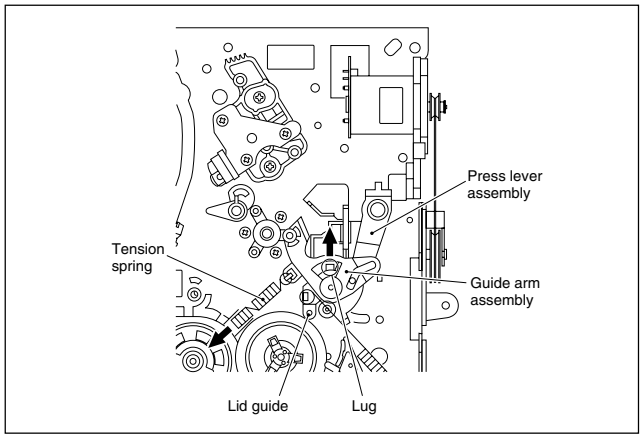


Fig. 2-2-5a

2.2.6 Audio Control Head

1. How to remove

(1) Remove the two screws (A) and remove the audio control head together with the head base.
(2) When replacing only the audio control head, remove the three screws (B) while controlling the compression spring.

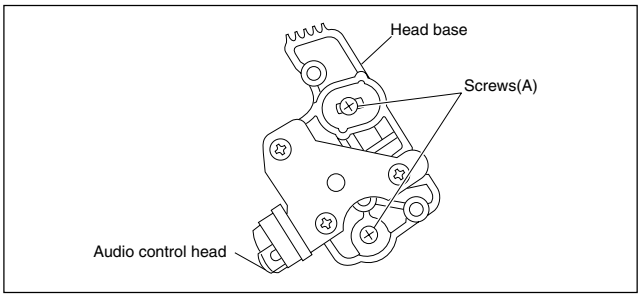


Fig. 2-2-6a

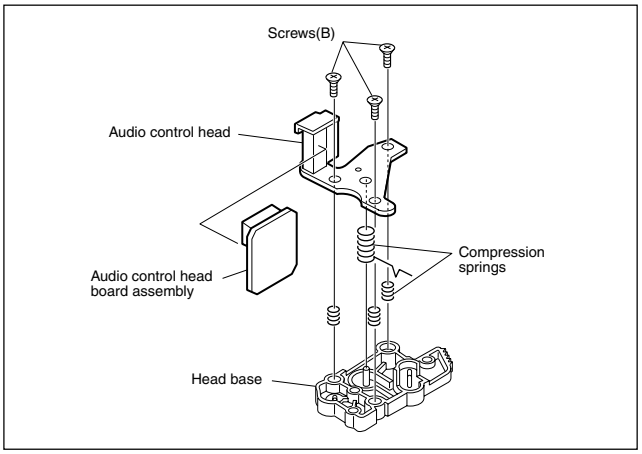


Fig. 2-2-6b

2. How to install

(1) To make the post-installation adjustment easier, set the temporary level as indicated in Fig.2-2-6c. Also make sure that the screw center (centre) is brought into alignment with the center (centre) position of the slot.

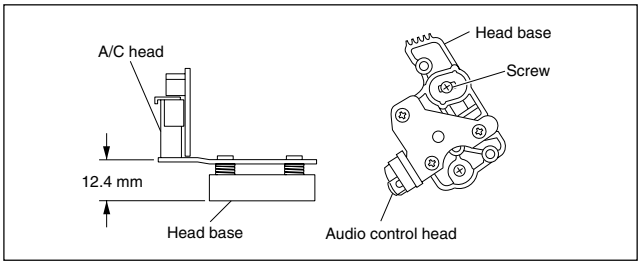


Fig. 2-2-6c

2.2.7 Loading Motor

1. How to remove

(1) Remove the belt wound around the worm gear.
(2) Open the two lugs of the motor guide and remove the loading motor, loading motor board assembly and motor guide altogether by pulling them up.
(3) When replacing the loading motor board assembly, take care with the orientation of the loading motor. (Install so that the loading motor label faces upward.)
(4) When the motor pulley has been replaced, choose the fitting dimension as indicated in Fig.2-2-7a.

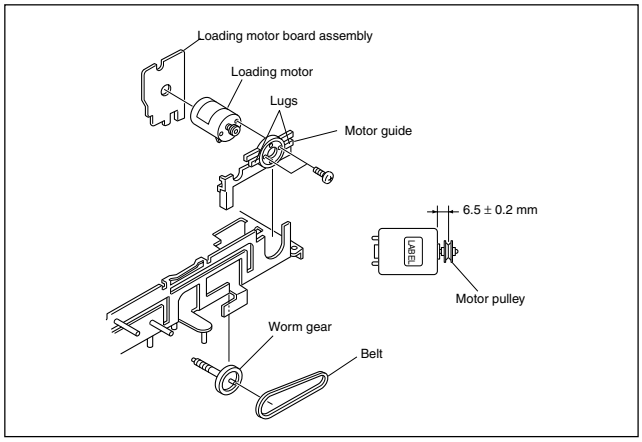


Fig. 2-2-7a

2.2.8 Capstan Motor

1. How to remove

(1) Remove the belt (capstan) on the mechanism assembly back side.
(2) Remove the three screws (A) and remove the capstan motor.

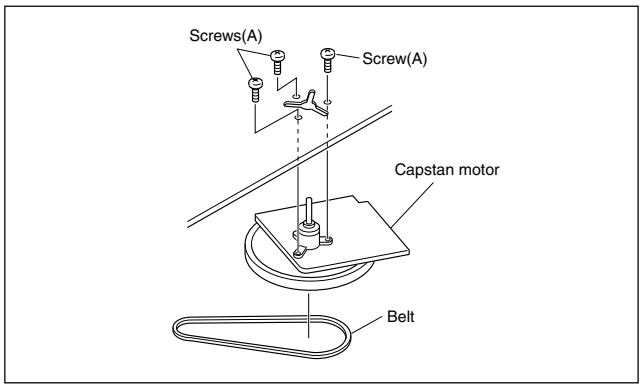


Fig. 2-2-8a

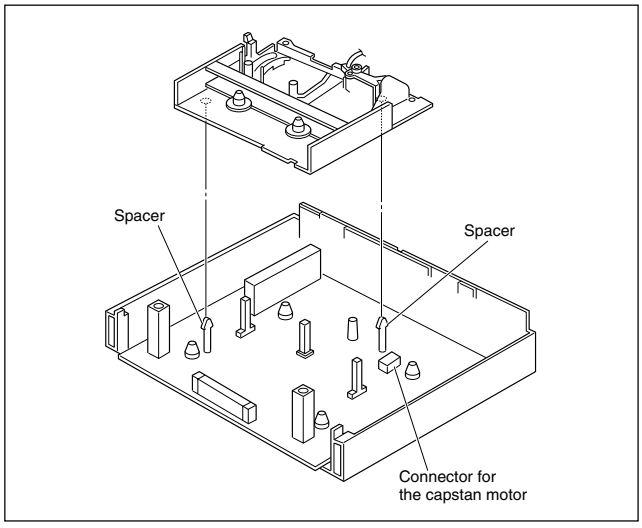


Fig. 2-2-8b

2. How to install (Centering the mounting position)

When the capstan motor has once been removed and then reinstalled out of the initial correct position in the rotational direction, the capstan motor current may be unstable during operation in high or low temperatures. This may result in greater Wow & Flutter and occasionally in power breakdown because of current over - load. Install the capstan motor while following the procedure given below.
(The capstan motor is centrally located when the unit is shipped from the factory.)

(1) Provisionally tighten the three screws (A) securing the capstan motor.
(2) Install the mechanism assembly to which the capstan motor is provisionally fastened on the bottom chassis which incorporates the Main board assembly. (No need to tighten the screws for mounting the mechanism.)
Make sure that all the connectors for the mechanism assembly and the Main board assembly are correctly installed as indicated in Fig. 2-2-8b.
(3) Making sure that the connector for the capstan motor is correctly mounted, and securely tighten the three screws (A).

Note:

- ***When the capstan motor has been replaced with a new one, perform recording in the EP(or LP) mode for at least 2 minutes at normal temperatures immediately before starting the FF/REW or SEARCH operations (Aging).***

2.2.9 Pole Base Assembly (supply or take-up side)

1. How to remove

(1) Remove the UV catcher 2 on the removal side by loosening the screw (A).
(2) Remove the pole base assembly on the supply side from the mechanism assembly by loosening the screw (B) on the mechanism assembly back side and sliding the pole base assembly toward the UV catcher 2.
(3) As for the pole base assembly on the take-up side, turn the pulley of the loading motor to lower the cassette holder because the screw (B) is hidden under the control plate. (See the “Procedures for Lowering the Cassette holder assembly” of 1.3 DISASSEMBLY/ASSEMBLY METHOD.) Further turn the motor pulley to move the cassette holder until the screw (B) is no longer under the control plate (in the half-loading position). Then remove it as done for the supply side by removing the screw (B).

Note:

- ***After reinstalling the Pole base assembly and the UV catcher2, be sure to perform compatibility adjustment.***

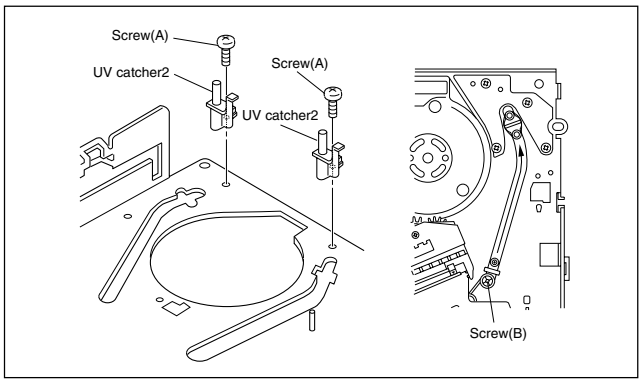


Fig. 2-2-9a

2.2.10 Rotary Encoder

1. How to remove

(1) Remove the screw (A) and remove the rotary encoder by pulling it up. (See Fig. 2-2-10a.)

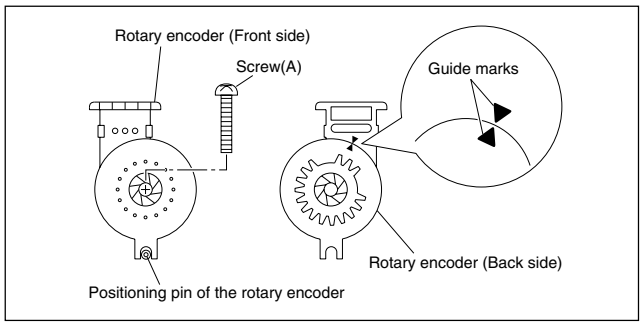


Fig. 2-2-10a

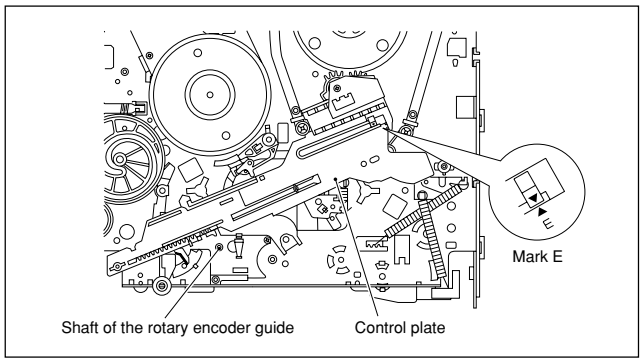


Fig. 2-2-10b

2. How to install (Phase matching)

(1) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft and bring the guide marks on the rotary encoder into alignment as indicated in Fig.2-2-10a. (See Fig. 2-2-10a and Fig. 2-2-10b.)

(2) Turn over the rotary encoder with its guide marks kept in alignment and install it by fitting on the shaft of the rotary encoder guide and the positioning pin.

(3) Tighten the screw (A) to complete the installation.

2.2.11 Clutch Unit

(1) Remove the belt wound around the capstan motor and the clutch unit.

(2) Remove the slit washer and remove the clutch unit.

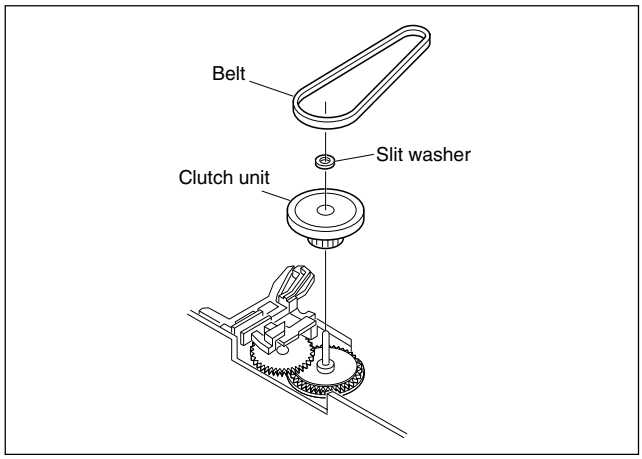


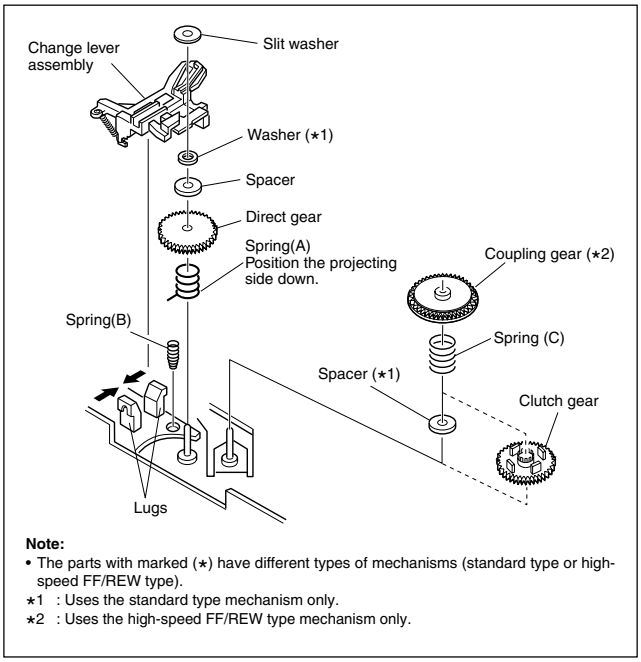
Fig. 2-2-11a

2.2.12 Change Lever Assembly, Direct Gear, Clutch Gear and Coupling Gear

1. How to remove

(1) Release the two lugs of the rotary encoder guide in the arrow-indicated direction and remove the change lever assembly.

(2) Remove the slit washer retaining the direct gear and remove the latter.
Take care so as not to lose the washer and spring. (See Fig.2-2-12a.)



Note:
- The parts with marked (⋆) have different types of mechanisms (standard type or high-speed FF/REW type).

⋆1 : Uses the standard type mechanism only.
⋆2 : Uses the high-speed FF/REW type mechanism only.

Fig. 2-2-12a

2. How to install

(1) Install the clutch gear, spring (A), spring (C), direct gear, spacer and others to the individual shafts of the main deck, and finally the slit washer. (See Fig.2-2-12a.)

(2) Let the spring (B) drops into the rotary encoder guide hole and install the change lever assembly.(Take care not to mistake a direction of the spring.) The point is to slightly lift the coupling gear and catch it from the both sides with the assembly. (See Fig.2-2-12b.)

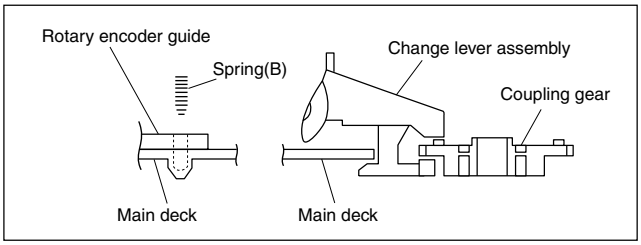


Fig. 2-2-12b

2.2.13 Link Lever

1. How to remove

(1) Remove the two slit washers.
(2) Remove the link lever by lifting it from the shaft retained by the slit washers. Then swing the link lever counterclockwise and remove it from the locking section of the control plate.

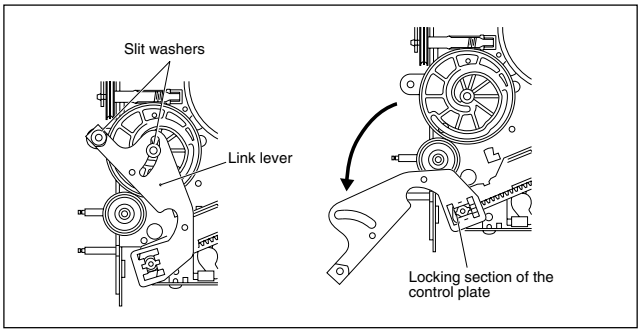


Fig. 2-2-13a

2. How to install (Phase matching)

(1) Slide the control plate so that its mark E is aligned with the mark ▼ on the loading arm gear shaft. (See Fig.2-2-13b.)
(2) Rotate the worm gear until the guide hole of the control cam is aligned exactly with the guide hole of the main deck. (See Fig.2-2-13c.)
(3) Insert the link lever into the locking section of the control plate. (See Fig.2-2-13a.)
(4) Rotate the link lever clockwise so that it is installed on the shafts in the center (centre) and on the left of the control cam.
(5) Fasten the slit washers at these two points.

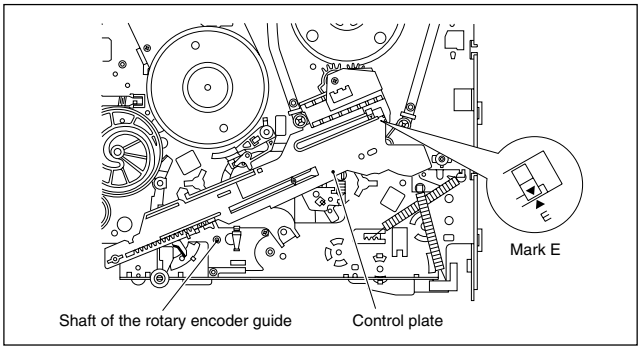


Fig. 2-2-13b

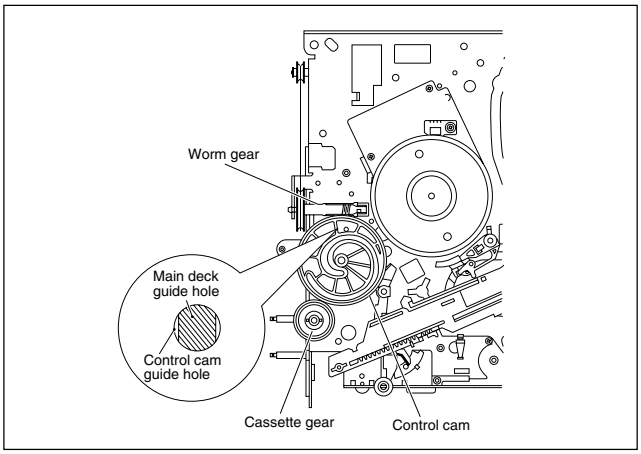


Fig. 2-2-13c

2.2.14 Cassette Gear, Control Cam and Worm Gear

1. How to remove

(1) Remove the control cam by lifting it.
(2) Open the two lugs of the cassette gear outward and pull the latter off.
(3) Remove the belt wound around the worm gear and the loading motor.
(4) Open the lug of the lid guide outward and remove the worm gear.

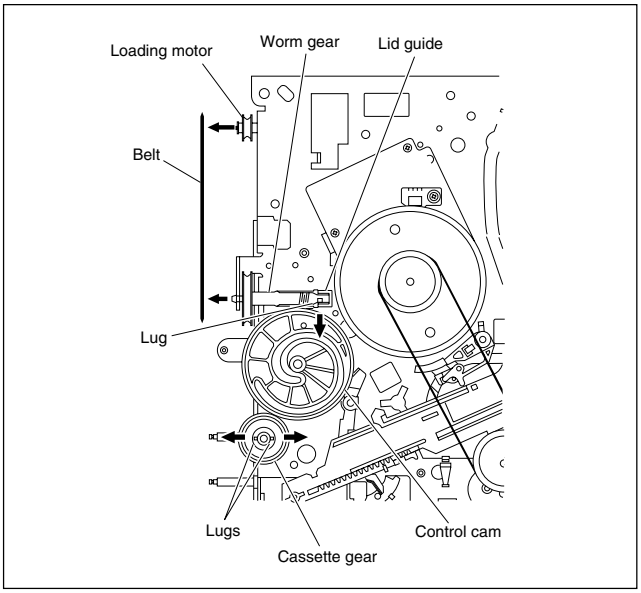


Fig. 2-2-14a

2.2.15 Control Plate

1. How to remove

(1) Remove the screw (A) retaining the control bracket 1 and remove the latter.
(2) Slide the control plate as indicated by the arrow and remove the control plate. (See Fig.2-2-15a.)

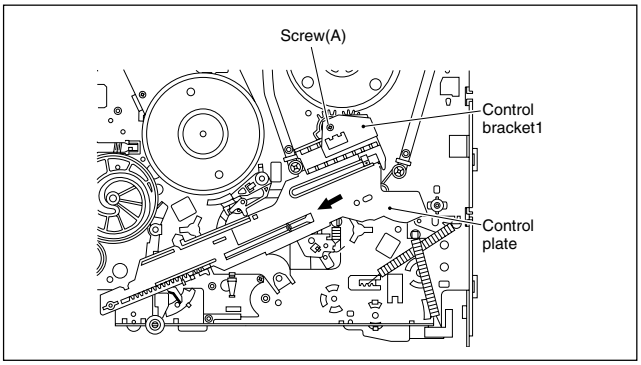


Fig. 2-2-15a

2. How to install (Phase matching)

(1) Adjust the position of the idler arm assembly pin as indicated in Fig.2-2-15b (to the left of center (centre) of the R section).
(2) Bring the guide hole of the take-up lever into alignment with the hole at the control plate guide and fix the position by inserting a 1.5 mm hexagonal wrench.

(3) Install the control plate so that the section A of the loading arm gear shaft fits into the hole (A) of the control plate, the section B of the control plate guide into the hole (B), and the control plate comes under the section C of the rotary encoder guide and the section D of the loading arm gear shaft while press-fit the pole base assmebly (supply side) as indicated by the arrow. It is important that the tension arm assembly shaft is positioned closer toward you than the control plate. (See Fig.2-2-15c.)
(4) Make sure that the mark E of the control plate is in alignment with the mark ▼ of the loading arm gear shaft. (See Fig.2-2-15c.)
(5) Pull off the hexagonal wrench for positioning.

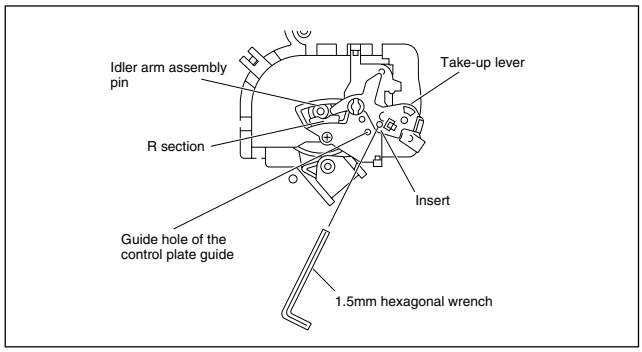


Fig. 2-2-15b

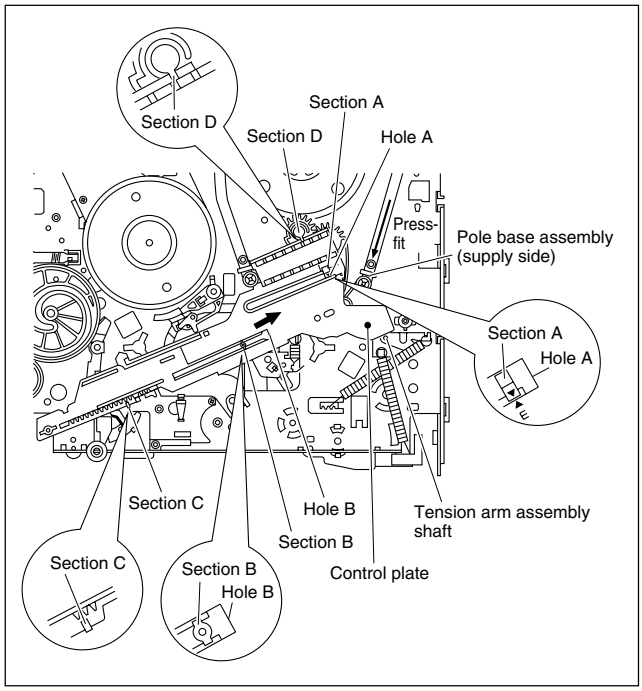


Fig. 2-2-15c

2.2.16 Loading Arm Gear (supply or take-up side) and Loading Arm Gear Shaft

1. How to remove

(1) Remove the loading arm gear (supply side) by loosening the screw (A). (See Fig. 2-2-16a.)
(2) Remove the screw (B) and remove the torsion arm from the pole base assembly (take-up side). (See Fig.2-2-16a.)
(3) Turn the loading arm gear (take-up side) clockwise so that the notch of the loading arm gear (take-up side) is in alignment with the projection of the loading arm gear shaft and lift it.
Likewise, turn the loading arm counterclockwise so that the notch is in alignment with the projection and remove the loading arm gear (take-up side). (See Fig.2-2-16a and Fig. 2-2-16b.)
(4) When removing the loading arm gear shaft, be sure of first removing the screw retaining the drum assembly (on the back side of the loading arm gear shaft). Then remove the screw (C) and remove the loading arm gear shaft by sliding it.

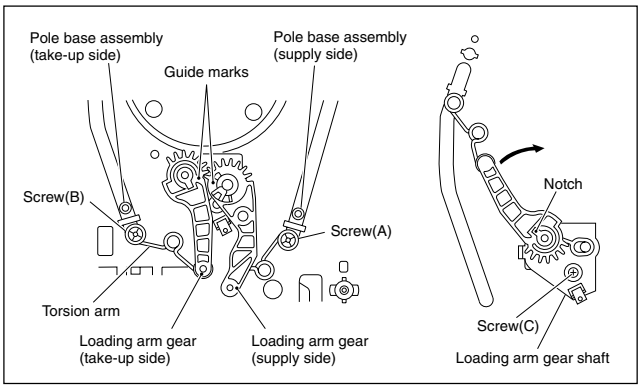


Fig. 2-2-16a

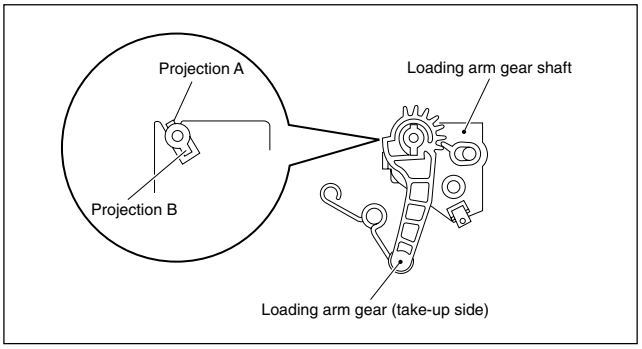


Fig. 2-2-16b

2. How to install

(1) Align the notch of the loading arm gear (take-up side) to the projection B of the loading arm gear shaft and slip it over. Then rotate it clockwise for alignment with the projection A and slip it down to the bottom. (See Fig.2-2-16b.)
(2) Then turn the loading arm gear (take-up side) counterclockwise. Hang the torsion arm on the pole base assembly (take-up side) and tighten the screw (B).
(3) Install the loading arm gear (supply side) so that the guide mark of the loading arm gear (take-up side) is in alignment with the guide mark of the loading arm gear (supply side). Then hang the torsion arm on the pole base assembly (supply side) and tighten the screw (A). (See Fig.2-2-16a.)

2.2.17 Take-up Lever, Take-up Head and Control Plate Guide

(1) Remove the spring of the take-up lever from the main deck.
(2) Remove the lug (A) of the take-up lever from the main deck and pull out the take-up lever and the take-up head together.
(3) Remove the screw (A).
(4) Align the idler arm assembly pin in the center (centre) of the R section of the control plate guide, remove the control plate guide lugs (B) and (C) from the main deck, and remove the control plate guide.

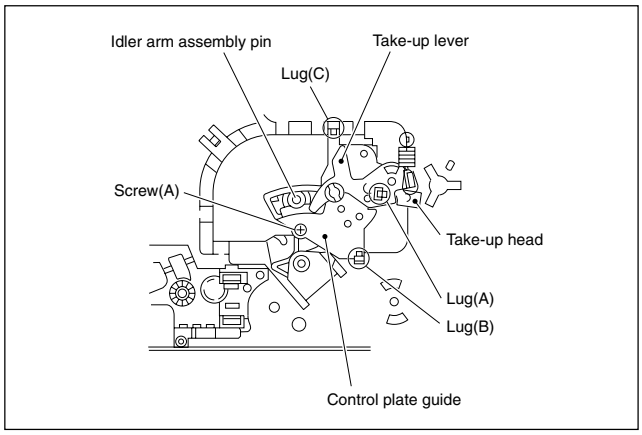


Fig. 2-2-17a

2.2.18 Capstan Brake Assembly

1. How to remove

(1) Move the lug (A) of the capstan brake assembly in the arrow-indicated direction so that it comes into alignment with the notch of the main deck. (See Fig. 2-2-18a.)
(2) Remove the lug (B) of the capstan brake assembly from the main deck and remove the capstan brake assembly.

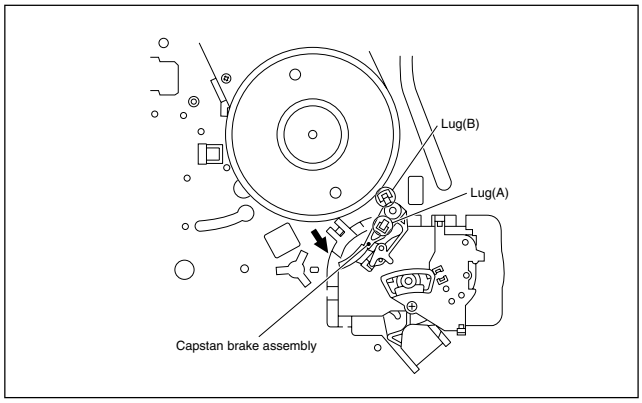


Fig. 2-2-18a

2.2.19 Sub Brake Assembly (take-up side)

1. How to remove

(1) Remove the spring attached to the lid guide and sub brake assembly (take-up side).
(2) Bring the lug (A) of the sub brake assembly (take-up side) into alignment with the notch of the main deck.
(3) Remove the lugs (B) and (C) of the sub brake assembly (take-up side) from the main deck and remove the sub brake assembly (take-up side).

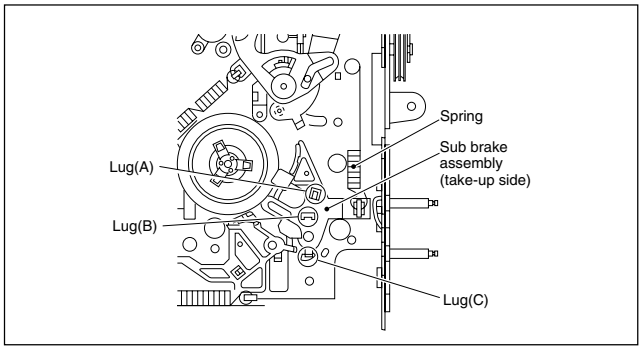


Fig. 2-2-19a

2.2.20 Main Brake Assembly (take-up side), Reel Disk (take-up side) and Main Brake Assembly (supply side)

1. How to remove

(1) Move the main brake assembly (take-up side) in the arrow-indicated direction and remove the reel disk (take-up side).
(2) Remove the spring attached to the main brake assembly.
(3) Remove the lug (A) of the main brake assembly (take-up side) and pull out the lug (B) after bringing it into alignment with the main deck notch.
(4) Remove the lugs (C), (D) and (E) of the main brake assembly (supply side) from the main deck and pull them off. (See Fig.2-2-20a.)
(5) When installing the main brake assembly (take-up side), slide the brake lever in the direction as indicated by the arrow to prevent it from hitting the projection of the main brake assembly (take-up side). (See Fig.2-2-20b.)

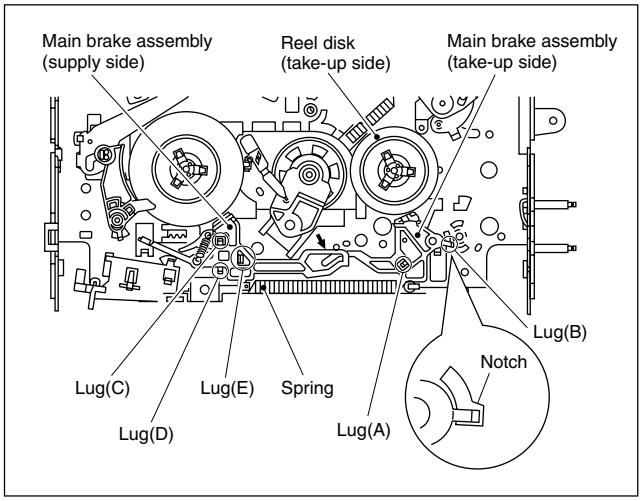
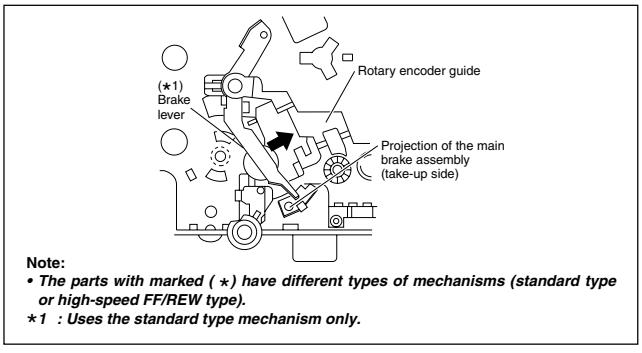


Fig. 2-2-20a



Note:
• The parts with marked (∗) have different types of mechanisms (standard type or high-speed FF/REW type).
∗1 : Uses the standard type mechanism only.

Fig. 2-2-20b

2.2.21 Tension Brake Assembly, Reel Disk (supply side) and Tension Arm Assembly

1. How to remove

(1) Remove the three lugs of the tension brake assembly from the main deck and pull them off.
(2) Remove the reel disk (supply side) by loosening in the arrow-indicated direction the main brake assembly (supply side).
(3) Remove the tension spring on the back of the main deck. Then release the lug of the tension arm bearing in the arrow-indicated direction and draw out the tension arm assembly. (See Fig. 2-2-21a.)

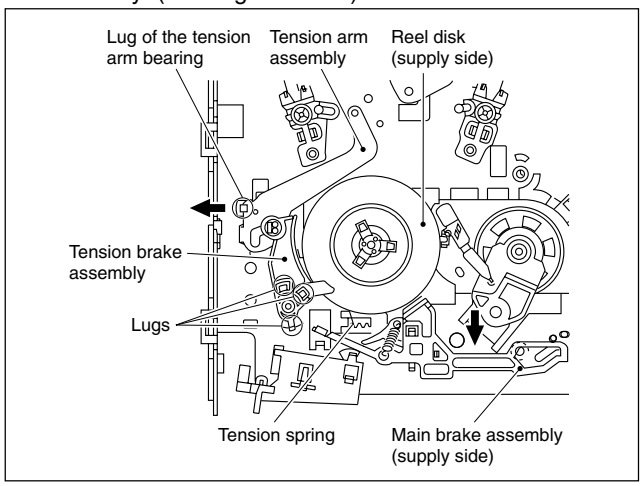


Fig. 2-2-21a

2.2.22 Idler Lever, Idler Arm Assembly

1. How to remove

(1) Remove the lug of the idler lever from the main deck and remove the hook fitted in the idler arm assembly hole by lifting it.
(2) Remove the slit washer and pull out the idler arm assembly.

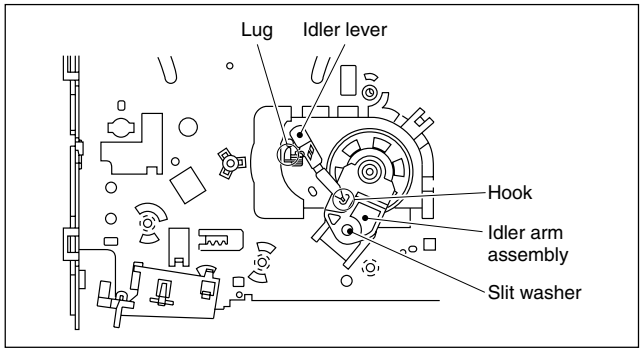


Fig. 2-2-22a

2.2.23 Stator Assembly

(1) Remove the flat cable.
(2) Remove the two screws (A).
(3) Remove the stator assembly by lifting in the arrow-indicated direction. (Take care that the brush spring does not jump out.)
(4) After installation, be sure to perform the PB switching point adjustment according to the electrical adjustment procedure.

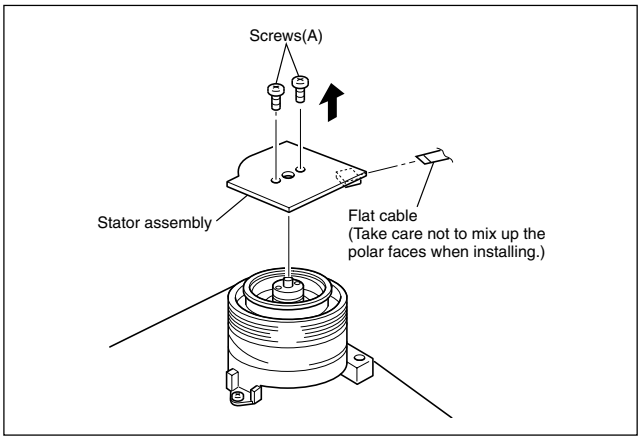


Fig. 2-2-23a

2.2.24 Rotor Assembly

(1) Remove the stator assembly.
(2) Remove the two screws (B) and remove the rotor assembly.

Note:

- ***When installing the rotor assembly, note that a normal picture cannot be obtained without ensuring the phase matching as mentioned below.***

(3) Match the phases of the upper drum assembly and the rotor assembly as indicated in Fig.2-2-24a.
(4) Place the upper drum assembly hole (a) over the rotor assembly holes (b) (with three holes to be aligned) and tighten the two screws (B). (See Fig.2-2-24a.)

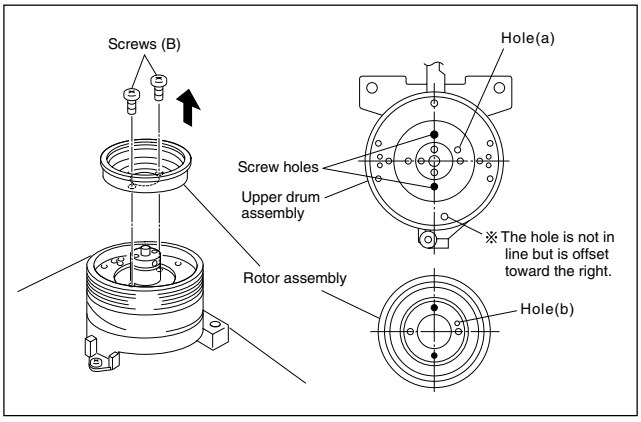


Fig. 2-2-24a

2.2.25 Upper Drum Assembly

1. How to remove

(1) Remove the stator assembly and rotor assembly.
(2) Loosen the screw of the collar assembly using a 1.5 mm hexagonal wrench and remove the collar assembly. Also remove the brush, spring and cap at one time.
(3) Remove the upper drum assembly and remove the washer using tweezers.

Note:

• When replacement is required, control the up- down movement of the brush. Never apply grease.

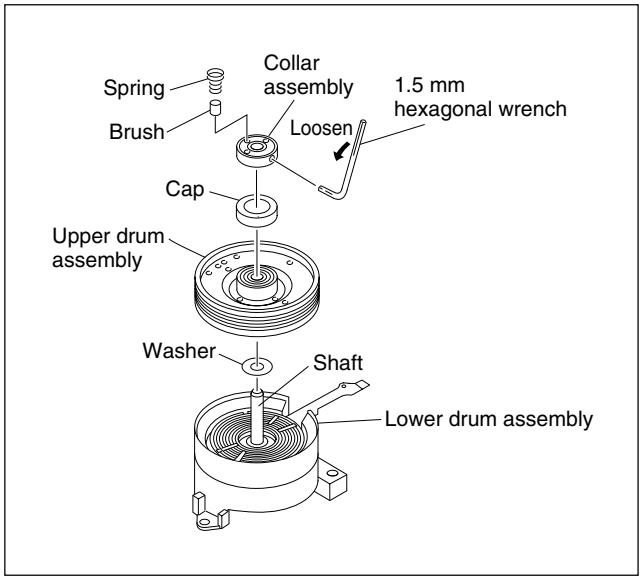


Fig. 2-2-25a

2. How to install

(1) Clean the coil parts of the lower drum assembly and the newly installed upper drum assembly with an air brush in advance. (See Fig.2-2-25b.)
(2) Install a new washer and upper drum assembly on the drum shaft. (See Fig.2-2-25a.)

Note:

• When replacing the upper drum assembly, replace it the together with the washer.

(3) Install the cap to the upper drum assembly.
(4) Position the collar assembly as indicated in Fig.2-2-25c while controlling its up- down movement.
(5) Secure the collar assembly in position with a hexagonal wrench while pressing its top with the fingers.
(6) After installation, gently turn the upper drum assembly with your hand to make sure that it turns normally. Then install the brush and the spring.
(7) Install the rotor assembly and stator assembly according to Fig 2-2-23a and 2-2-24a.
(8) When installation is complete, clean the upper drum assembly and lower drum assembly and carry out the following adjustments.
  • PB switching point adjustment
  • Slow tracking adjustment
  • Compatibility adjustment (Be sure to check for compatibility for the EP (or LP) mode.)

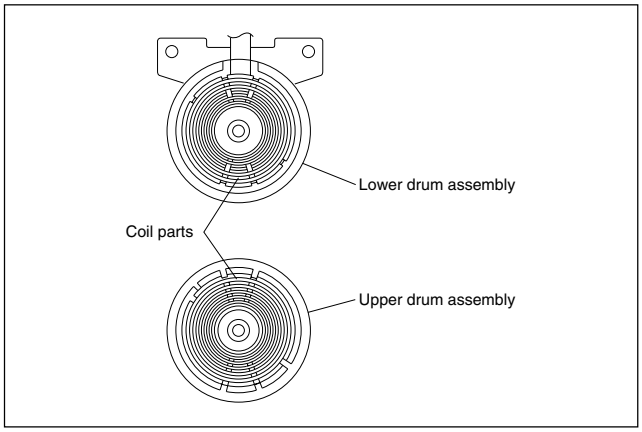


Fig. 2-2-25b

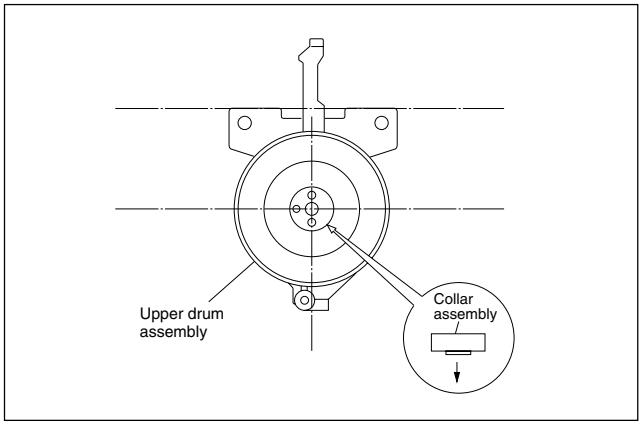


Fig. 2-2-25c

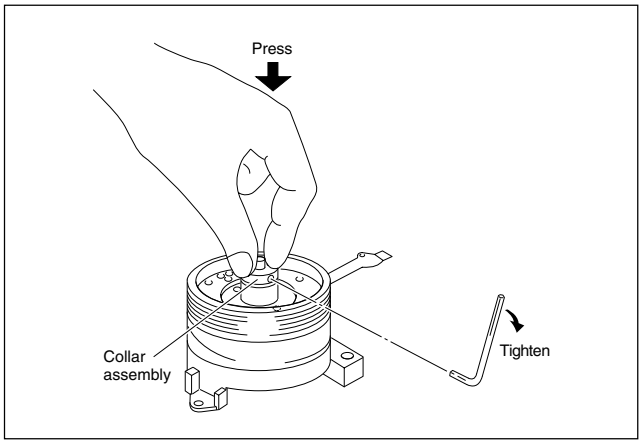


Fig. 2-2-25d

2.3 COMPATIBILITY ADJUSTMENT

Notes:

- ***Although compatibility adjustment is very important, it is not necessary to perform this as part of the normal servicing work. It will be required when you have replaced the audio control head, drum assembly or any part of the tape transport system.***
- ***To avoid any damage to the alignment tape while performing the compatibility adjustment, get a separate cassette tape (for recording and play back) ready to be used for checking the initial tape running behavior.***
- ***Unless otherwise specified, all measuring points and adjustment parts are located on the Main board.***
- ***When using the Jig RCU, set its custom code to match the custom code of the VCR.***

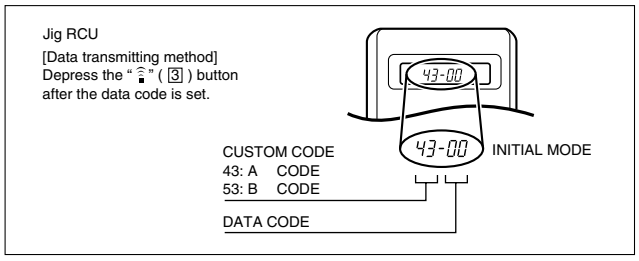


Fig. 2-3a Jig RCU [PTU94023B]

2.3.1 Checking/Adjustment of FM Waveform Linearity

Signal	(A1) (A2)	• Alignment tape(SP, stairstep, NTSC) [MHP] • Alignment tape(EP, stairstep, NTSC) [MHP-L]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Guide roller [Mechanism assembly]
Specified value	(G)	• Flat V.PB FM waveform
Adjustment tool	(H)	• Roller driver [PTU94002]

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Make sure that there is no significant level drop of the V.PB FM waveform caused by the tracking operation, with its generally parallel and linear variation ensured. Perform the following adjustments when required. (See Fig. 2-3-1a.)
(5) Reduce the V.PB FM waveform while pressing the channel buttons (+, –) during playback. If a drop in level is found on the left side, turn the guide roller of the pole base assembly (supply side) with the roller driver to make the V.PB FM waveform linear.
If a drop in level is on the right side, likewise turn the guide roller of the pole base assembly (take-up side) with the roller driver to make it linear. (See Fig. 2-3-1c.)
(6) Make sure that the V.PB FM waveform varies in parallel and linearly with the tracking operation again. When required, perform fine-adjustment of the guide roller of the pole base assembly (supply or take-up side).
(7) Unload the cassette tape once, play back the alignment tape (A1) again and confirm the V.PB FM waveform.
(8) After adjustment, confirm that the tape wrinkling does not occur at the roller upper or lower limits. (See Fig. 2-3-1d.)

[Perform adjustment step (9) only for the models equipped with SP mode and EP (or LP) mode.]

(9) Repeat steps (1) to (8) by using the alignment tape (A2).

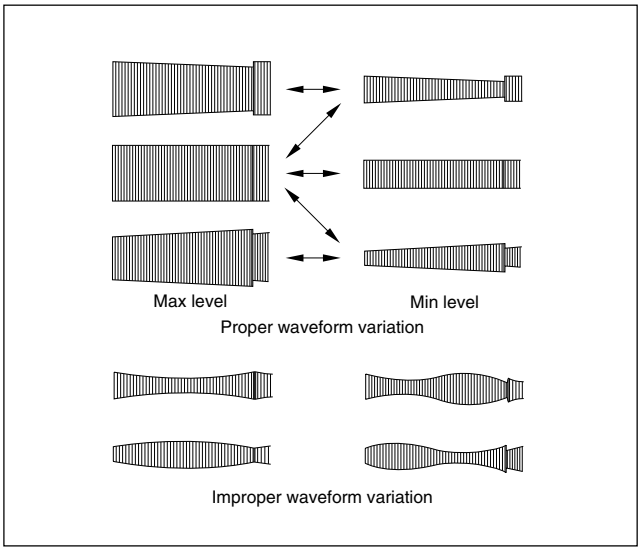


Fig. 2-3-1a

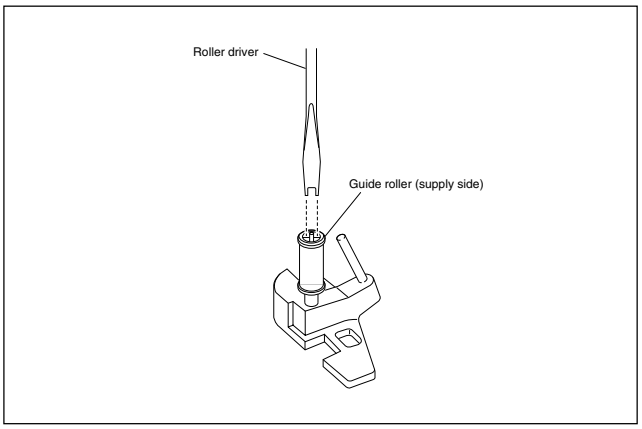


Fig. 2-3-1b

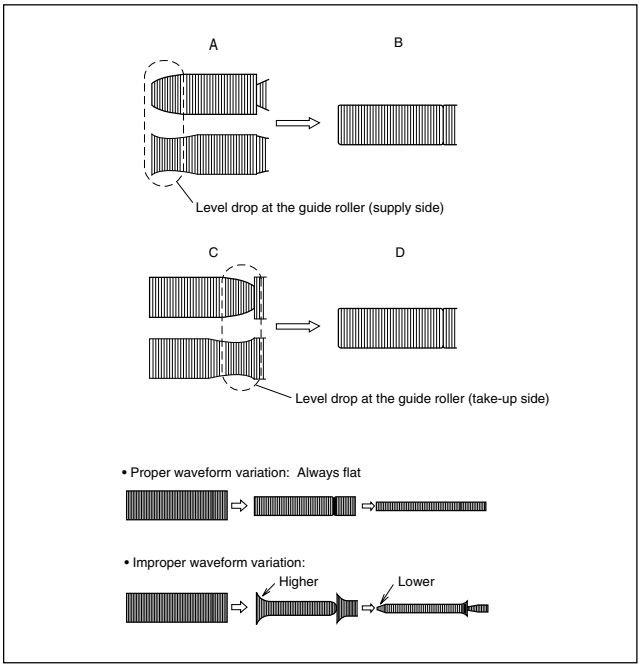


Fig. 2-3-1c

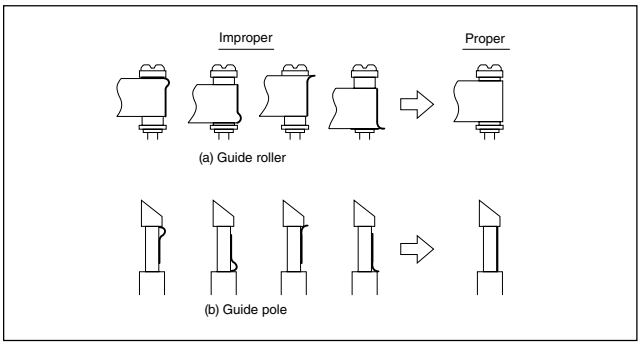


Fig. 2-3-1d

2.3.2 Checking/Adjustment of the Height and Tilt of the Audio Control Head

Note:

- ***Set a temporary level of the height of the A/C head in advance to make the adjustment easier after the A/C head has been replaced. (See Fig.2-2-6c.)***

Signal	(A)	• Alignment tape(SP, stairstep, NTSC) [MHP]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• AUDIO OUT terminal • TP4001 (CTL. P)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head [Mechanism assembly]
Specified value	(G)	• Maximum waveform

(1) Play back the alignment tape (A).
(2) Apply the external trigger signal to D.FF (E), to observe the AUDIO OUT waveform and Control pulse waveform at the measuring points (D1) and (D2) in the ALT mode.
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Adjust the AUDIO OUT waveform and Control pulse waveform by turning the screws (1), (2) and (3) little by little until both waveforms reach maximum. The screw (1) and (3) are for adjustment of tilt and the screw (2) for azimuth.

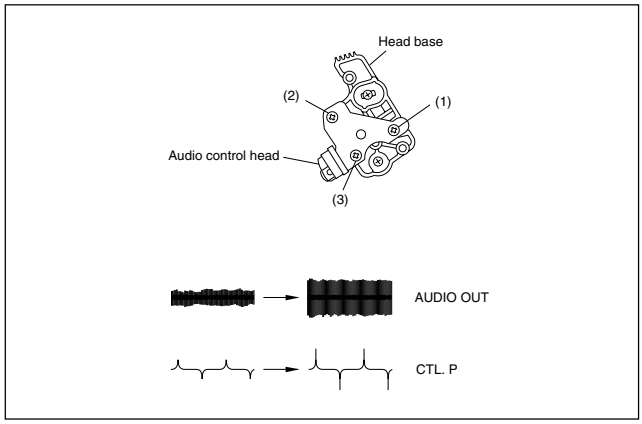


Fig. 2-3-2a

2.3.3 Checking/Adjustment of the Audio Control Head Phase (X-Value)

Signal	(A1)	• Alignment tape(SP, stairstep, NTSC) [MHP]
Mode	(B)	• PB
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• A/C head base [Mechanism assembly]
Specified value	(G)	• Maximum V.PB FM waveform
Adjustment tool	(H)	• A/C head positioning tool [PTU94010]

(1) Play back the alignment tape (A1).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Loosen the screws (4) and (5), then set the A/C head positioning tool to the innermost projected part of the A/C head. (See Fig. 2-3-3a.)
(5) Turn the A/C head positioning tool fully toward the capstan. Then turn it back gradually toward the drum and stop on the second peak point position of the V.PB FM waveform output level. Then tighten the screws (4) and (5).
(6) Perform the tracking operation and make sure that the V.PB FM waveform is at its maximum.
If it is not at maximum, loosen the screws (4) and (5), and turn the A/C head positioning tool to bring the A/C head to a position, around where the waveform reaches its maximum for the first time. Then tighten the screws (4) and (5).

[Perform adjustment steps (7) to (10) only for 2 Head models equipped with LP mode.]

(7) Then play back the alignment tape (A2).
(8) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(9) Perform the tracking operation and make sure that the V.PB FM waveform is at its maximum.
(10) If it is not at maximum, loosen the screws (4) and (5), and turn the A/C head positioning tool to bring the A/C head to a position, around where the waveform reaches its maximum for the first time. Then tighten the screws (4) and (5).

Note:

- ***After adjusting, always perform the confirmation and re-adjustment of the item 2.3.4.***

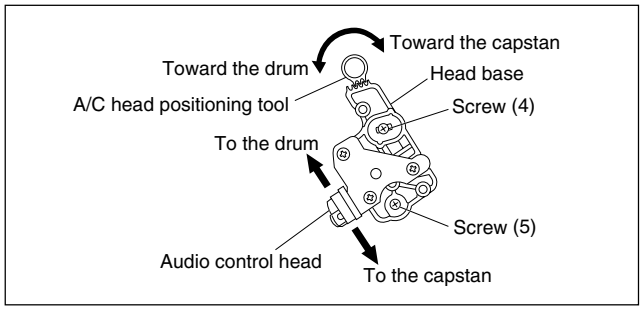


Fig. 2-3-3a

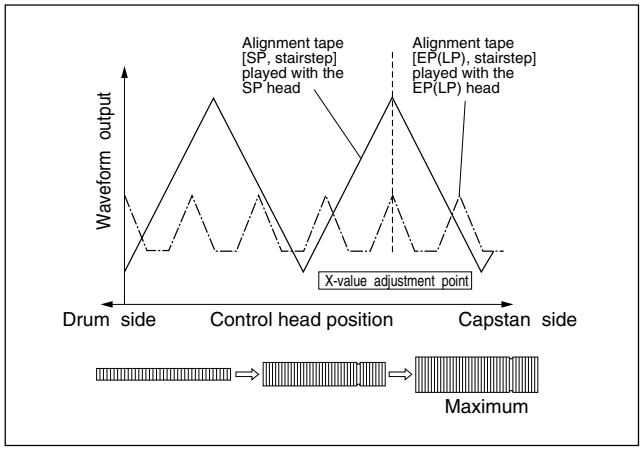


Fig. 2-3-3b

2.3.4 Checking/Adjustment of the Standard Tracking Preset

Signal	(A)	• Alignment tape(EP, stairstep, NTSC) [MHP-L]
Mode	(B)	• PB → Auto adjust
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)
Adjustment part	(F)	• Jig RCU: Code “50”
Specified value	(G)	• STOP mode (Maximum V.PB FM waveform)
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Play back the alignment tape (A).
(2) Apply the external trigger signal to D.FF (E), to observe the V.PB FM waveform at the measuring point (D).
(3) Confirm that the automatic tracking operation is completed.
(4) Set the VCR to the Auto adjust mode by transmitting the code (F) twice from the Jig RCU. When the VCR enters the stop mode, the adjustment is completed.
(5) If the VCR enters the eject mode, perform adjustment for the audio control head phase (X-value) again.

2.3.5 Checking/Adjustment of the Tension Pole Position

Signal	(A)	• Back tension cassette gauge [PUJ48076-2]
Mode	(B)	• PB
Adjustment part	(F)	• Adjust pin [Mechansim assembly]
Specified value	(G)	• 25 - 51 gf•cm (2.45 – 5 × 10^{-3} Nm]

(1) Play back the back tension cassette gauge (A).
(2) Check that the indicated value on the left side gauge is within the specified value (G).
(3) If the indicated value is not within the specified value (G), perform the adjustment in a following procedure.
  1) Set the VCR to the mechanism service mode. (See 1.5 MECHANISM SERVICE MODE.)
  2) Set the VCR to the play back mode and adjust by turning adjustment pin to align the tension arm assembly edge with the main deck hole (A) on the right edge marker. (See Fig. 2-3-5a)

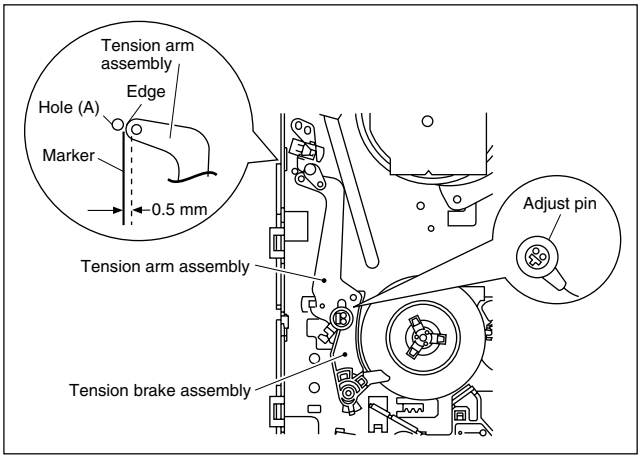
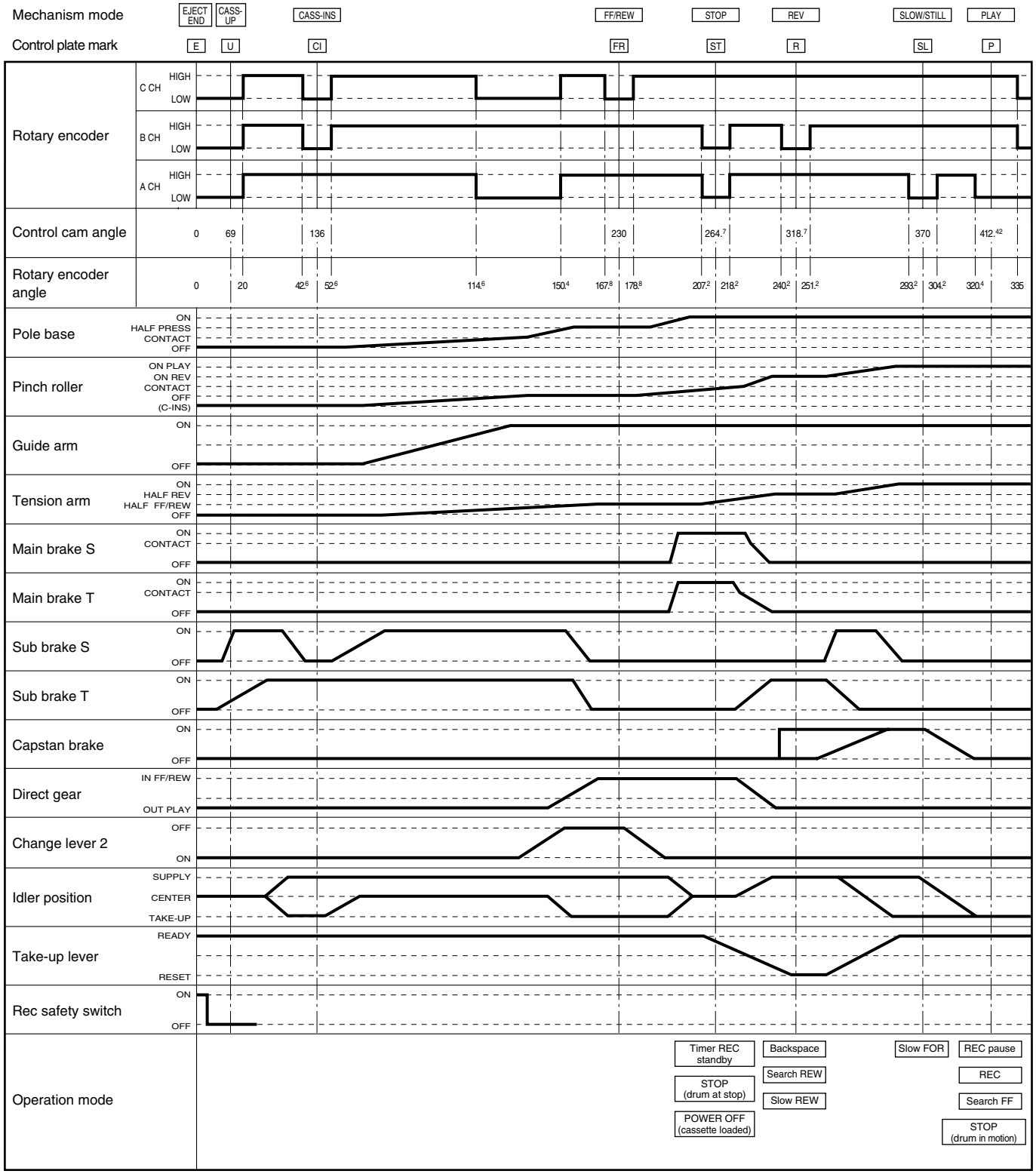


Fig. 2-3-5a

Mechanism Timing Chart



MECHANISM ADJUSTMENT (DV)

2.9 PREPARATION

2.9.1 Precautions

(1) Observe the specified screw tightening torque when attaching parts. The torque should be 0.04 Nm (0.4 kgfcm) unless otherwise specified.
(2) Always disconnect the power supply unit before proceeding to solder or attach parts.
(3) When plugging or unplugging a wire, be careful not to damage the connector.
(4) When replacing a part, be careful not to damage other parts or to mistakenly attach parts.

2.9.2 Tools Required for Adjustments

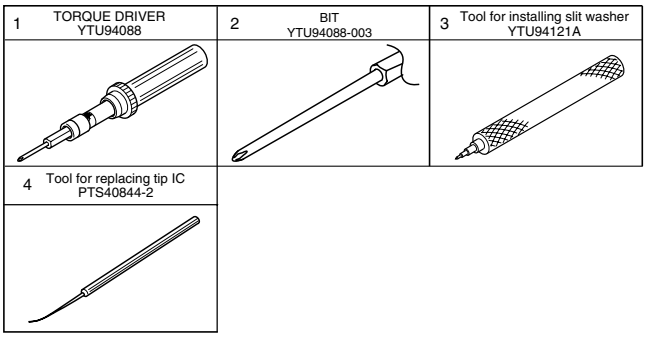

1 TORQUE DRIVER YTU94088
2 BIT YTU94088-003
3 Tool for installing slit washer YTU94121A
4 Tool for replacing tip IC PTS40844-2

Table 2-9-1 Tools Required for Adjustments

2.9.3 Disassembly and Assembly Procedures

The following table shows the steps for assembling or disassembling the mechanism parts. Read the following descriptions carefully before actual assembly/disassembly operations.

(1) : Order of disassembly steps. Reverse this order when assembling.
(2) : Name of the disassembled/assembled part.
(3) : Surface where the disassembled/assembled part is mounted. T = Top. B: Bottom.
(4) : Number of disassembly drawing.
(5) : Parts to be removed in disassembly/assembly, such as screws, washers and springs, and the points.

Symbol	Name & Point
S	Screw
W	Washer
P	Spring
*	Connector, lock(L), soldering(SD), shield, etc.

[Example] • (W1) = Remove the washer W1.
• (P1) = Remove the spring P1.

(6) : Notes for disassembly/assembly.
(7) : For the phase alignment in disassembly/assembly and the parts which require phase adjustments after assembly, see “2.16 MECHANISM PHASE CHECK/ADJUSTMENT”.

2.9.4 Screws and Washers Used in Disassembly/Assembly of the Mechanism Assembly

Table 2-9-1 shows the symbols, designs, part numbers and colors of the screws and washers used in the mechanism assembly.
When disassembling or assembling the mechanism assembly, be sure to attach screws and washers correctly by referring to the following table.

Symbol	Part number	Color
(S1)	QYTDSP2004Z	GOLD
(S2)	YQ43893	SILVER
(S3)	YQ43893-7	BLACK

Symbol	Part number	Color
(W1)	YQ44246	RED
(W2)	YQ44246-3	BLACK
(W3)	YQ43933-2	BLACK

Table 2-9-2

Step /Loc No.	Part Name		Fig. No.	Point	Note	Discription
①	Ⓐ Cassette housing assembly/ ⒷMechanism assembly	T	1	2(S1),(L1) – (L5)	1	
②	① Drum assembly	T	2	3(S2)	2,3	
③	② Motor bracket assembly	T	2	4(S2)	2,4	
④	③ Middle catcher assembly	T	3	3(S2)	—	
↑ (1)	↑ (2)	↑ (3)	↑ (4)	↑ (5)	↑ (6)	↑ (7)

2.10 DISASSEMBLY/ASSEMBLY OF THE MECHANISM ASSEMBLY

2.10.1 Introduction

The disassembly and assembly of the mechanism assembly should usually be performed in the ASSEMBLY mode. (Table 2-10-1)

Note that the mechanism is in the cassette in (C-IN) mode when the mechanism assembly is taken out of the set and that the C-IN mode should be switched to the ASSEMBLY mode in this case.

To set the ASSEMBLY mode, apply 3 V DC to the electrodes on the upper part of the loading motor as shown in Fig. 2-10-7.

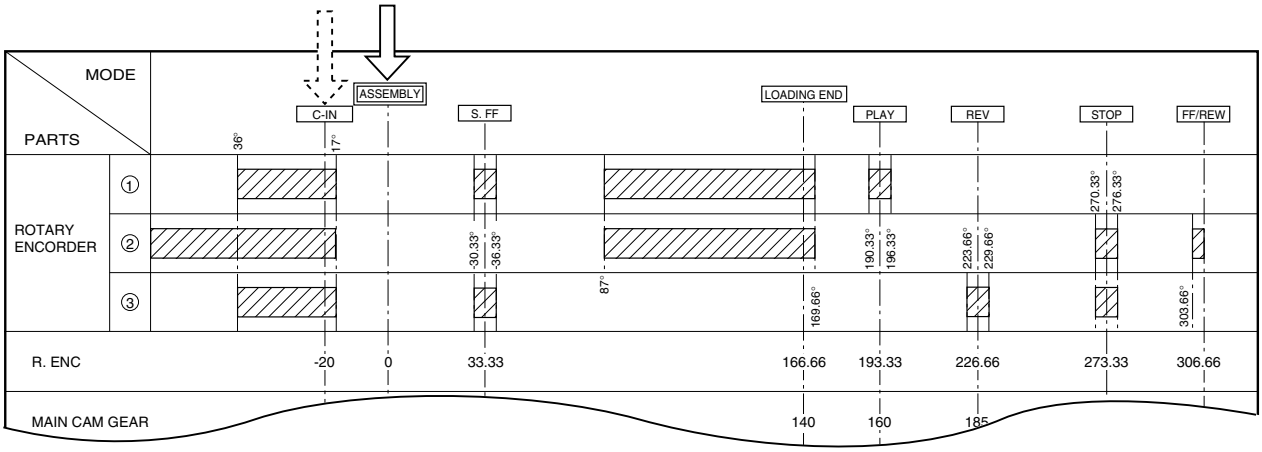


Table 2-10-1

2.10.2 Mechanism Modes

The mechanism has 6 modes as shown in Table 2-11-1. The current mode can be confirmed by the positioning of the " ○ " marking on the sub-cam gear and the "▲" marking on the mechanism.

See the following figures (Figs. 2-10-1 to -6) for details.

Note:

- ***This mechanism assembly has another ASSEMBLY mode. However, this mode cannot be identified from the markings because it corresponds to an intermediate position between the C-IN (Ⓒ) mode and S-FF (Ⓗ) mode. This mode can be confirmed by the rotary encoder phase. See Fig. 2-10-7.***

1. Checking the mechanism mode

<C-IN : Ⓒ>

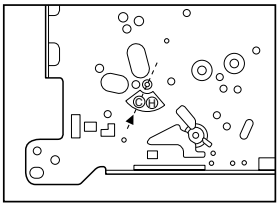


Fig. 2-10-1

<S-FF : Ⓗ>

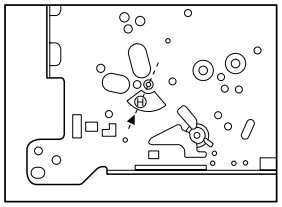


Fig. 2-10-2

<PLAY : Ⓟ>

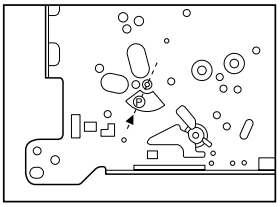


Fig. 2-10-3

<REV : Ⓡ>

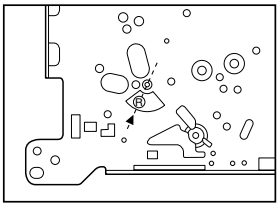


Fig. 2-10-4

<STOP : Ⓢ>

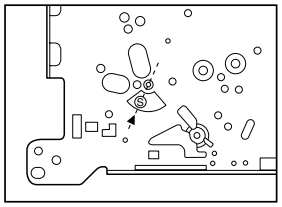


Fig. 2-10-5

<FF/REW : Ⓕ>

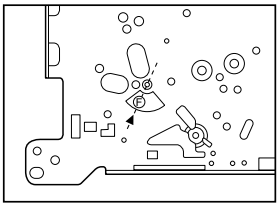


Fig. 2-10-6

2. Setting/checking the ASSEMBLY mode

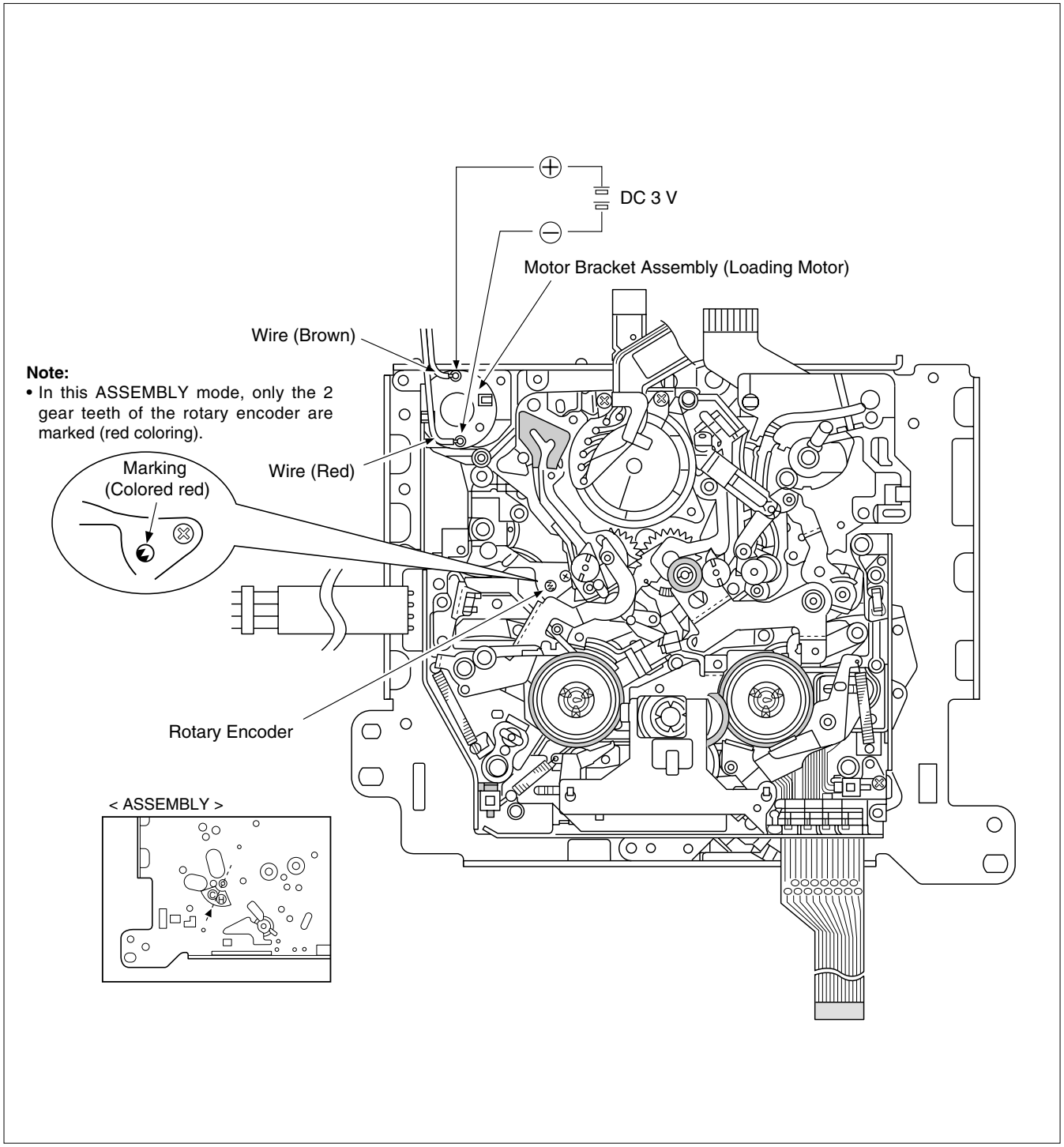

DC 3 V
Motor Bracket Assembly (Loading Motor)
Wire (Brown)
Note:
• In this ASSEMBLY mode, only the 2 gear teeth of the rotary encoder are marked (red coloring).
Wire (Red)
Marking
(Colored red)
Rotary Encoder
< ASSEMBLY >

Fig. 2-10-7

2.11 MECHANISM TIMING CHART

See following table (Table 2-11-1).

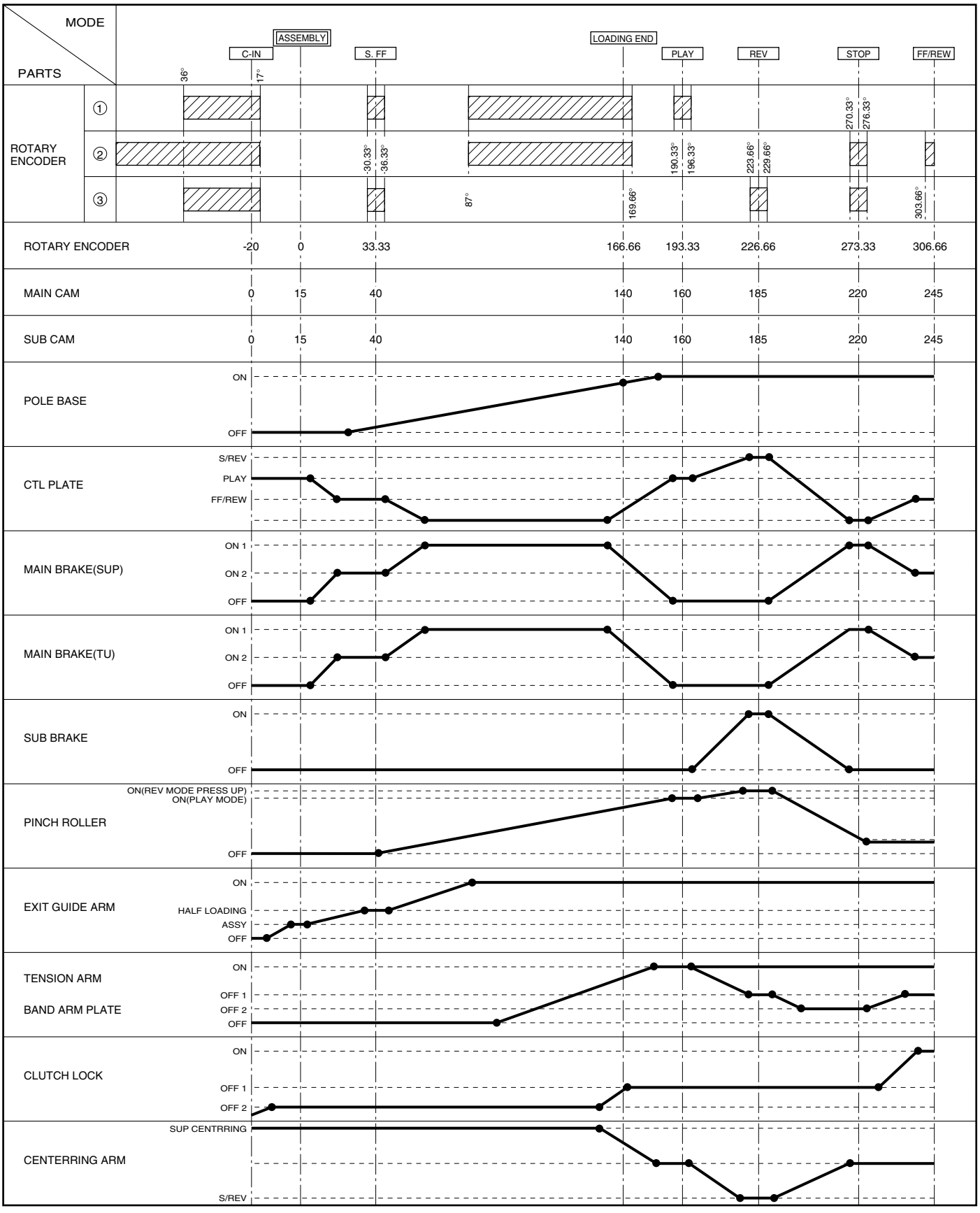


Table 2-11-1

2.12 MECHANISM ASSEMBLY/DISASSEMBLY PROCEDURE TABLE

Step /Loc No.	Part Name		Fig. No.	Point	Note	Discription
1	Ⓐ Cassette housing assembly/ Ⓑ Mechanism assembly	T	2-13-1	2(S1),(L1) – (L5)	1	
2	① Drum assembly	T	2-13-2	3(S2)	2,3	
3	② Motor bracket assembly	T	2-13-2	4(S2)	2,4	
4	③ Middle catcher assembly	T	2-13-3	3(S2)	—	
5	④ Reel cover assembly	T	2-13-3	(S2), 2(L6)	5	
6	⑤ Pinch roller arm assembly	T	2-13-4	(W1), (L7)	6	
7	⑥ Sub brake assembly	T	2-13-4	(P1), (W1), (L8)	—	
8	⑦ Band arm plate sub assembly	T	2-13-4	(S3), (L9), (P2), (W2)	7,8	
9	⑧ Tension arm sub assembly	T	2-13-4	(P3)	8	
10	⑨ EXIT guide arm assembly	T	2-13-5	(W1)	—	
11	⑩ Swing arm assembly	T	2-13-5	—	—	Position alignment
12	⑪ Sub deck assembly	T	2-13-6	4(S2)	9	Position alignment
13	⑫ Main brake (Sup) assembly	T	2-13-6	(P4), (L10)	—	
14	⑬ Main brake (Take up) assembly	T	2-13-6	(P5), (L11)	—	
15	⑭ Reel disk assembly (Sup)	T	2-13-7	—	—	
16	⑮ Reel disk assembly (Take up)	T	2-13-7	—	—	
17	⑯ Prism	T	2-13-7	(S2)	—	
18	⑰ Control plate	T	2-13-7	2(L12)	—	
19	⑱ Guide rail (Take up) assembly	T	2-13-8	4(S2)	10	Position alignment
20	⑲ Guide rail (Sup) assembly	T	2-13-8	(S2), 2(L13)	10	Position alignment
21	⑳ Base plate assembly	T	2-13-8	(S2), 2(L14)	—	
22	㉑ Ent. guide base assembly	T	2-13-9	(S2)	—	
23	㉒ Worm wheel 2	T	2-13-9	—	11	Phase alignment
24	㉓ Timing belt	T	2-13-9	—	—	
25	㉔ Center gear assembly	T	2-13-9	—	—	
26	㉕ Reel drive pulley assembly	T	2-13-10	(W1)	—	
27	㉖ Push plate	T	2-13-10	(W1)	—	
28	㉗ Clutch lock gear(2)	T	2-13-10	(W3)	—	
29	㉘ Clutch lock gear (1)	T	2-13-10	(P6)	—	
30	㉙ Tension control arm assembly	T	2-13-11	(L15)	12	Position alignment
31	㉚ Brake control arm assembly	T	2-13-11	(W1), (L16)	12	Position alignment
32	㉛ Charge arm assembly	T	2-13-11	(L17)	13	Position alignment
33	㉜ Connect gear 2	T	2-13-12	(S2)	—	(Phase alignment)
34	㉝ Connect gear 2	T	2-13-12	(S2)	—	(Phase alignment)
35	㉞ Rotary encoder assembly	T	2-13-13	2(S2)	14	Phase alignment
36	㉟ Main cam	T	2-13-13	(W1)	15	Phase alignment
37	㊱ Arm gear 1 assembly	T	2-13-13	Collar	15,16	Position alignment
38	㊲ Centering arm assembly	T	2-13-13	(L18)	15	Position alignment
39	㊳ Sub cam	T	2-13-14	(S2)	17	Phase alignment
40	㊴ Arm gear 2 assembly	T	2-13-14	—	17	Position alignment
41	㊵ Clutch lock lever assembly	T	2-13-14	(L19)	17,18	Position alignment
42	㊶ Capstan motor	T	2-13-15	(P7), Adjust nut	—	Vertical adjustment
43	㊷ Drum base deck	T	2-13-15	3(S2)	—	

Table 2-12-1

TOP VIEW

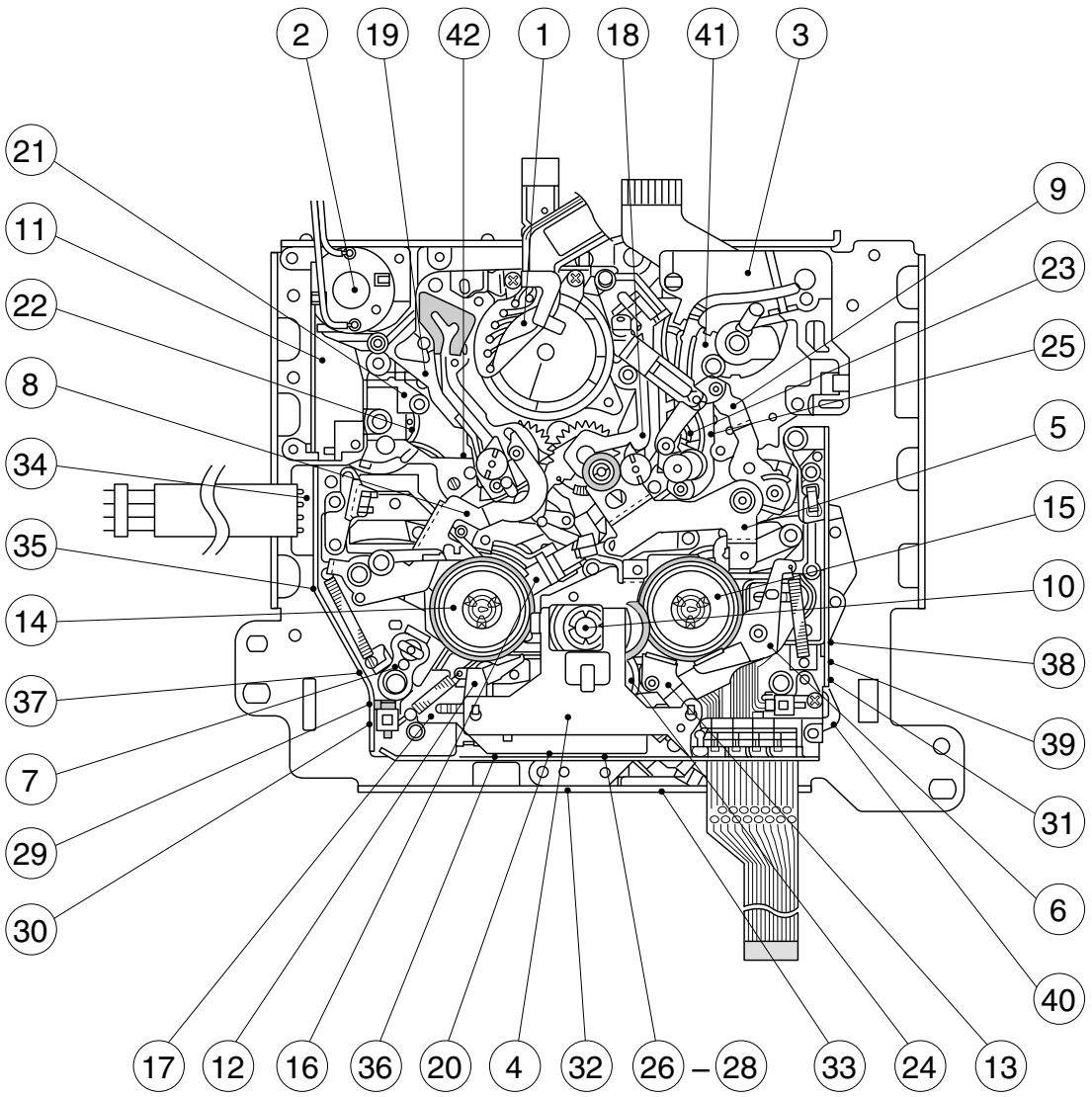


Fig. 2-12-1

2.13 DISASSEMBLY/ASSEMBLY

1. Ⓐ Cassette Housing Assembly/ Ⓑ Mechanism Assembly

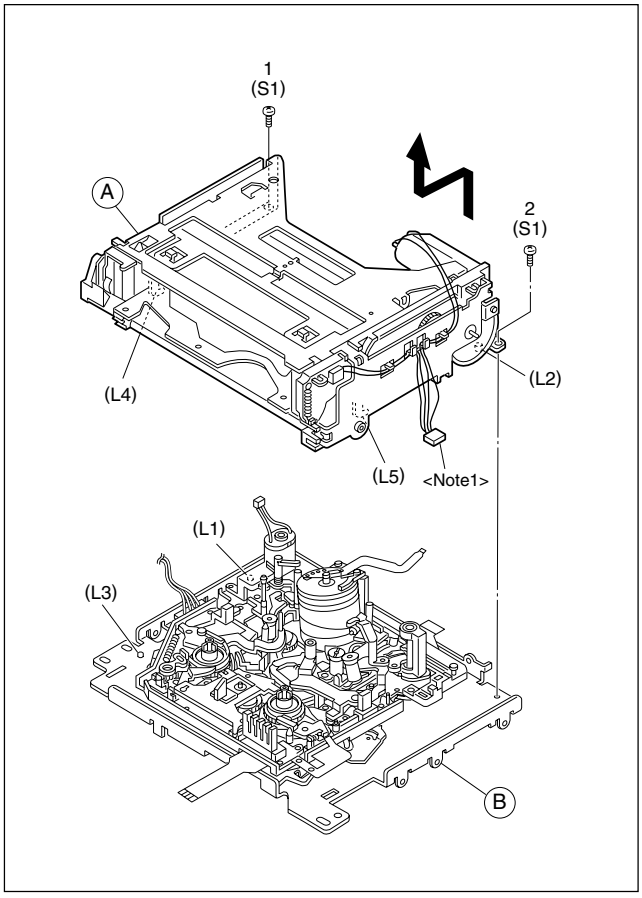


Fig. 2-13-1

<Note 1> : If the wires for the cassette housing motor are connected to the circuit board, remove them before disassembly.

2. ① Drum assembly / ② Motor bracket assembly

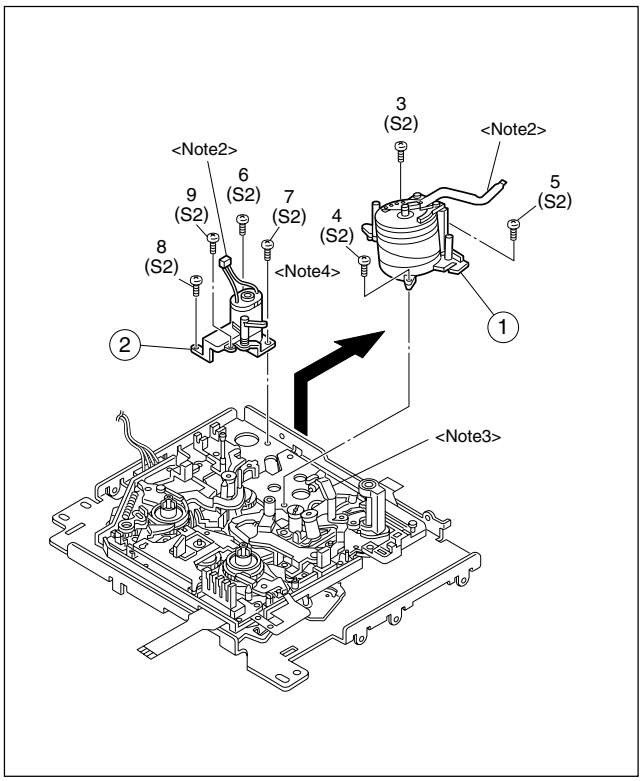


Fig. 2-13-2

<Note 2> : If wires are connected to the circuit board, remove them before disassembly.

<Note 3> : Be careful not to damage the drum assembly when removing it.

<Note 4> : The bracket (DV) may come in the way of removal of screw (7). Be sure to remove the bracket before proceeding to the screw removal.

3. ③ Middle Catcher Assembly/ ④ Reel Cover Assembly

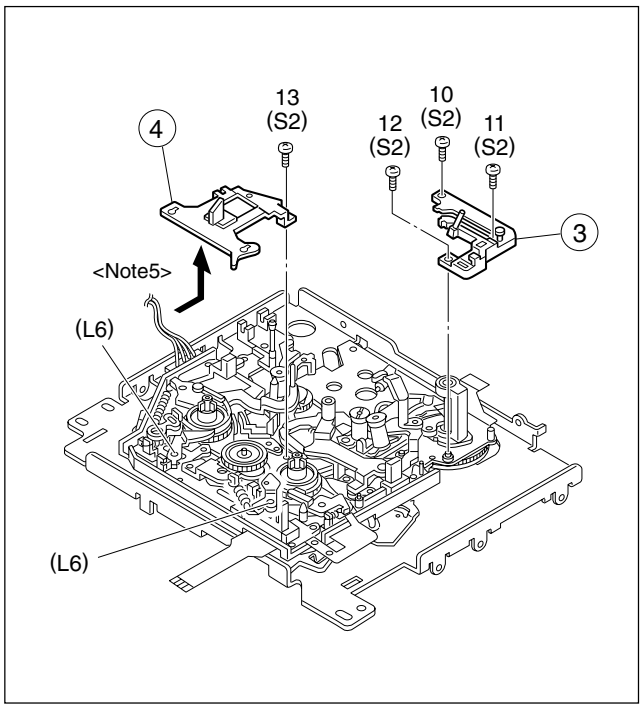


Fig. 2-13-3

<Note 5> : Once the reel cover assembly has been removed, the parts located below it tend to slip out easily: Be careful.

4. ⑤ Pinch Roller Arm Assembly/ ⑥ Sub Brake Assembly/ ⑦ Band Arm Plate Sub Assembly/ ⑧ Tension Arm Sub Assembly

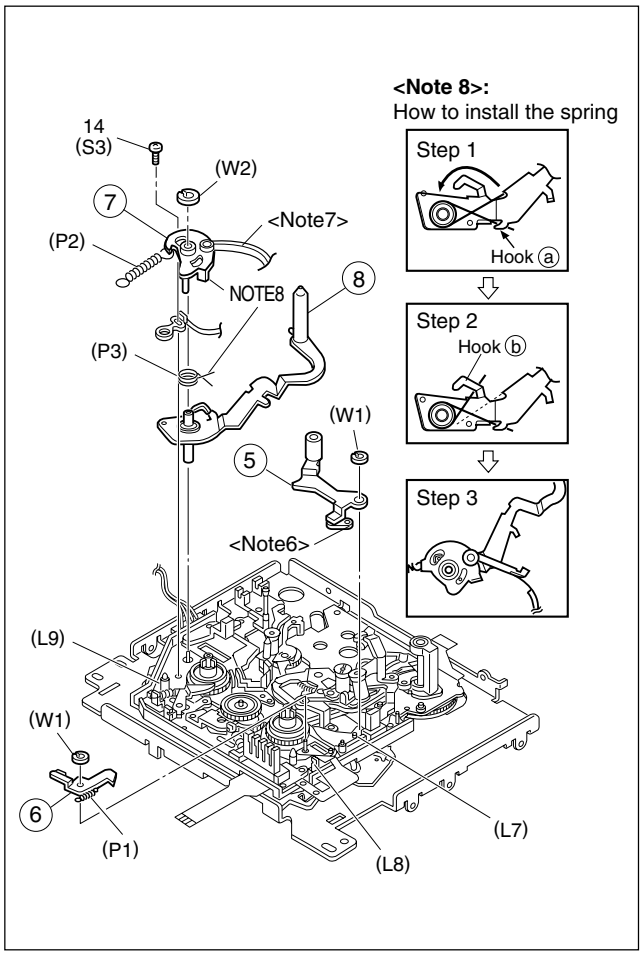


Fig. 2-13-4

<Note 6> : When attaching this part, fit it in the boss (L7) on the charge arm assembly.

<Note 7> : When attaching or removing this part, take care of the handling of the band section.

<Note 8> : After fitting the spring on the shaft, engage it with hook ⓐ first then with hook ⓑ.
After attaching it, set it to the positioning shown in “Step 3” and confirm that band arm plate sub assembly ⑦ can be rotated in the direction of the arrow as shown below.

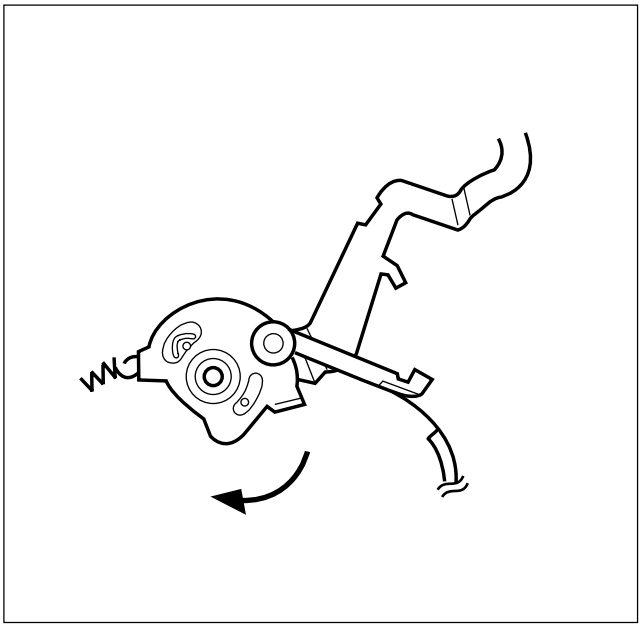


Fig. 2-13-4A

5. ⑨ EXIT Guide Arm Assembly/ ⑩ Swing Arm Assembly

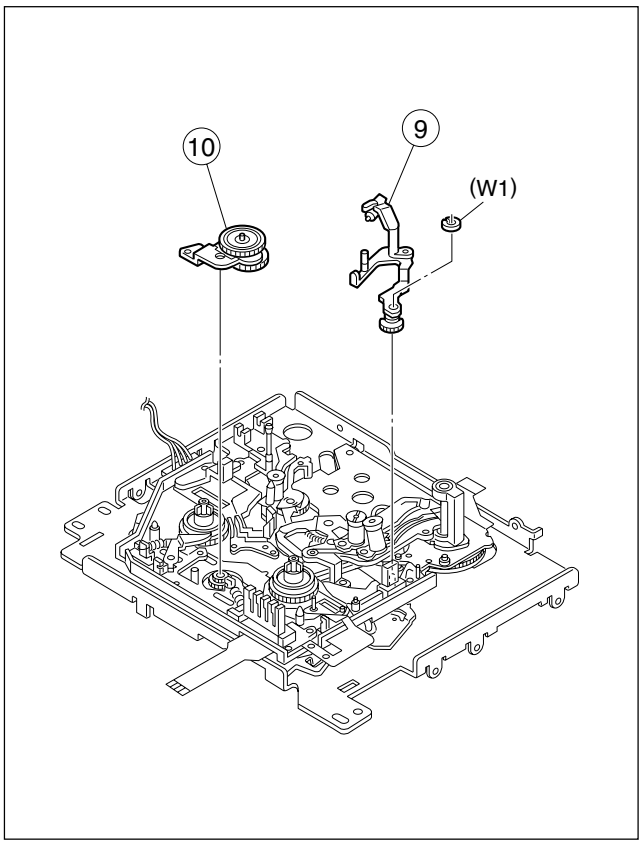


Fig. 2-13-5

6. ⑪ Sub Deck Assembly/ ⑫ Main Brake (Sup) Assembly/ ⑬ Main Brake (Take up) Assembly

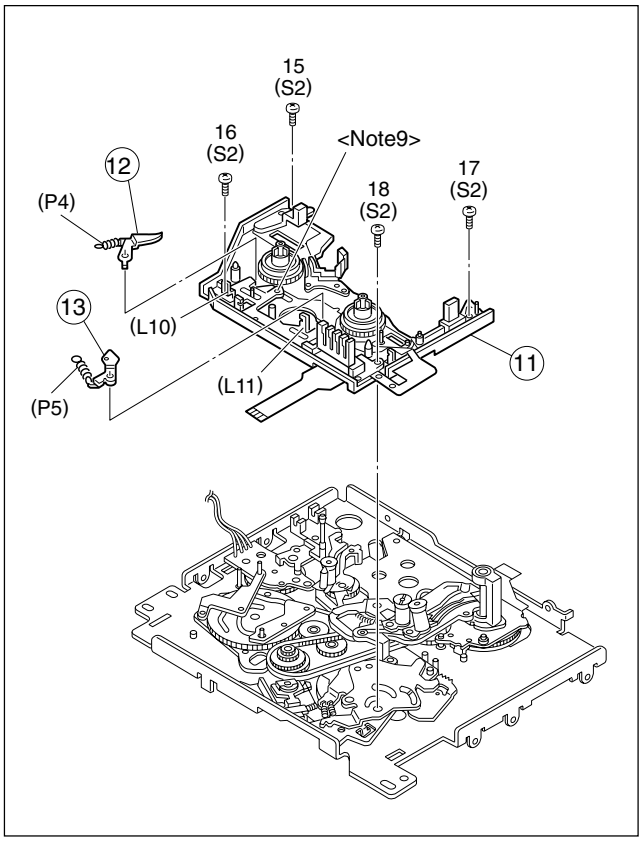


Fig. 2-13-6

<Note 9> : When attaching the sub deck assembly, make sure to adjust the phase of the control plate.

7. ⑭ Reel disk assembly (Sup) / ⑮ Reel disk assembly (Take up) / ⑯ Prism / ⑰ Control plate

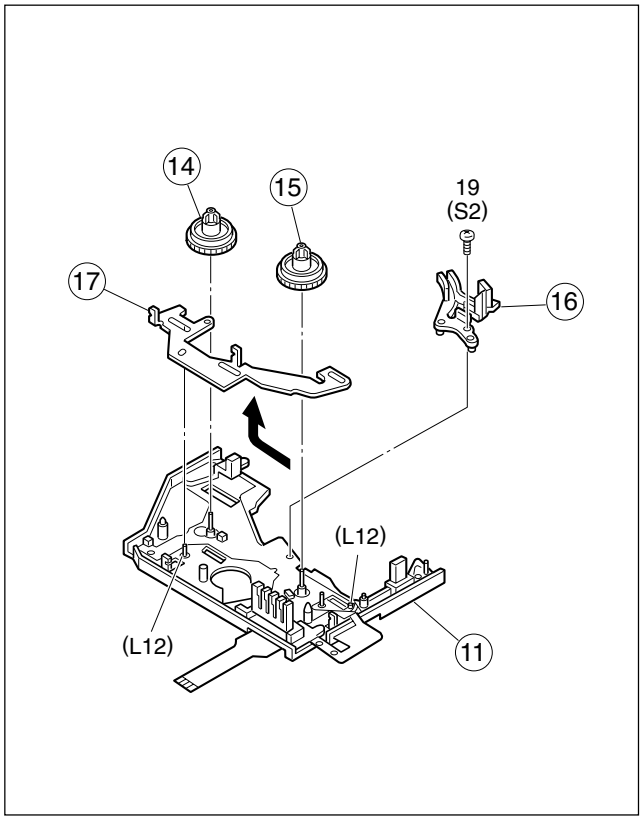


Fig. 2-13-7

8. ⑱ Guide rail (Take up) assembly / ⑲ Guide rail (Sup) assembly / ⑳ Base plate assembly

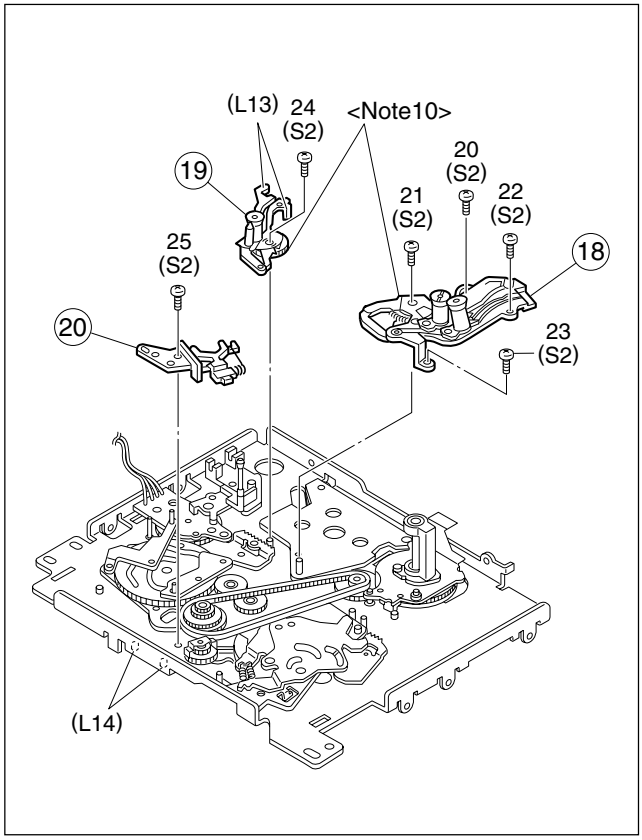


Fig. 2-13-8

<Note 10> : When attaching, set the alignment markings of the two gears so that the markings face opposite to each other.

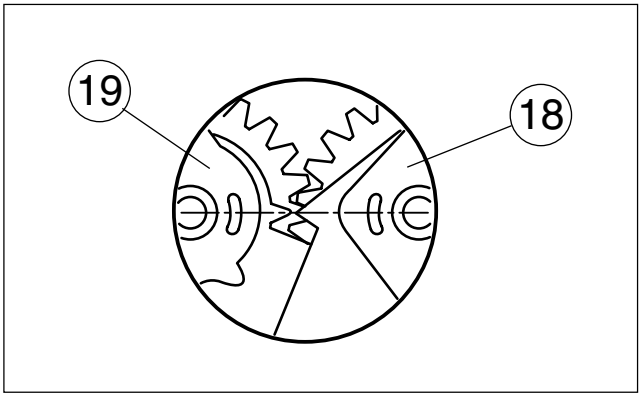


Fig. 2-13-8A

9. ㉑ Ent. guide base assembly / ㉒ Worm wheel 2 / ㉓ Timing belt / ㉔ Center gear assembly

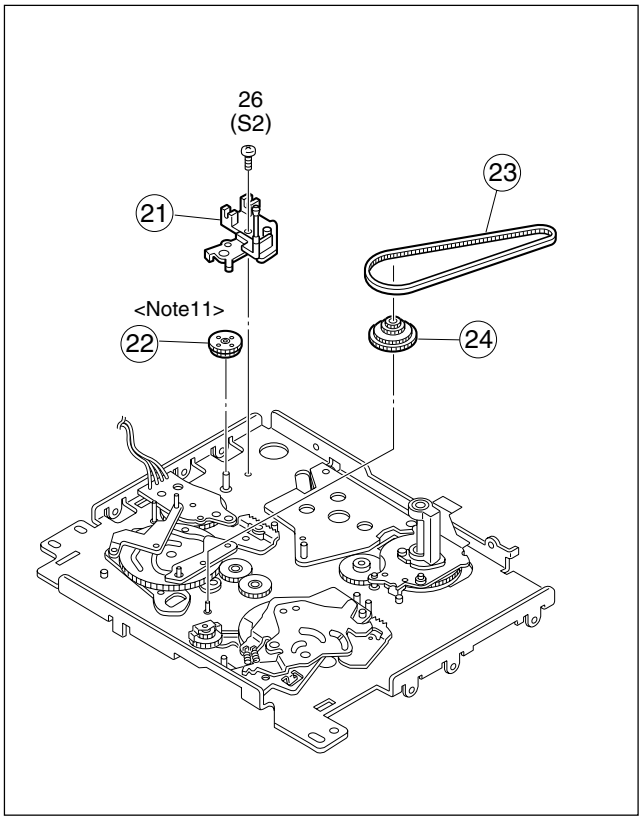


Fig. 2-13-9

10. ㉕ Reel drive pulley assembly / ㉖ Push plate ㉗ Clutch lock gear(2) / ㉘ Clutch lock gear (1)

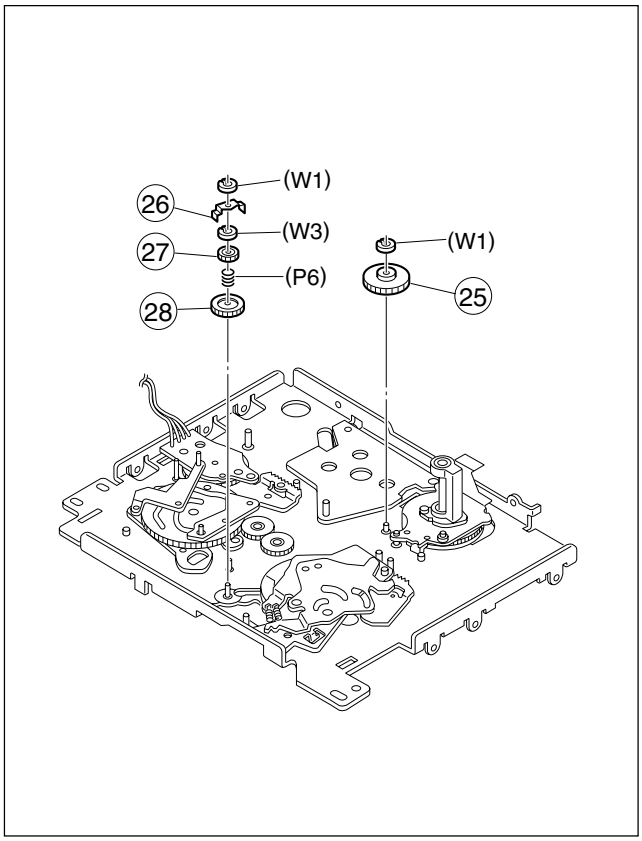
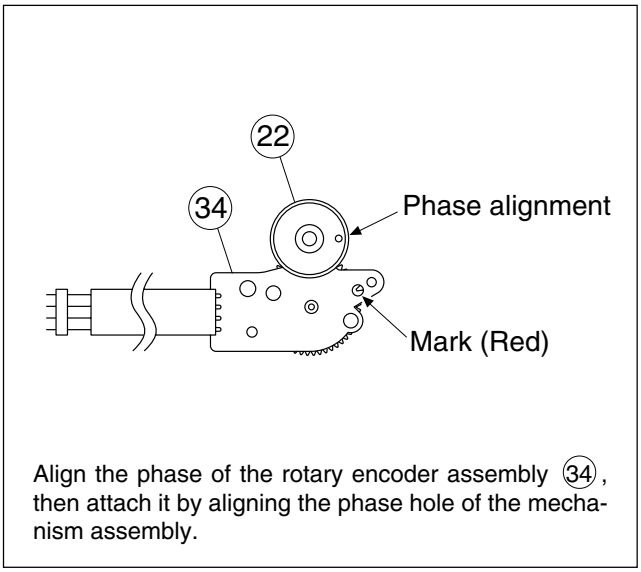


Fig. 2-13-10

<Note 11> : How to attach the worm wheel 2 ㉒ .



Align the phase of the rotary encoder assembly ㉞, then attach it by aligning the phase hole of the mechanism assembly.

Fig. 2-13-9A

11. ㉙ Tension control arm assembly/ ㉚ Brake control arm assembly / ㉛ Charge arm assembly

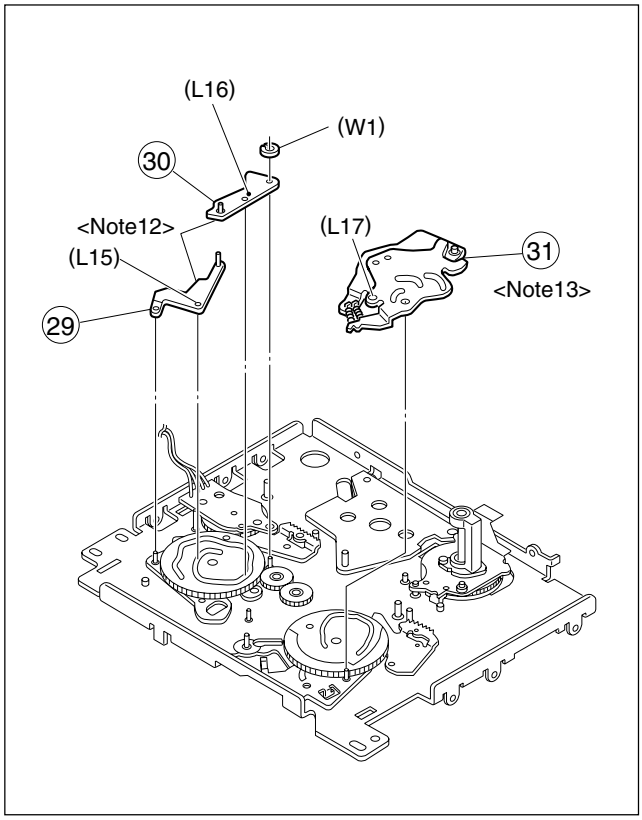


Fig. 2-13-11

12. ㉜ Connect gear 2 / ㉝ Connect gear 2

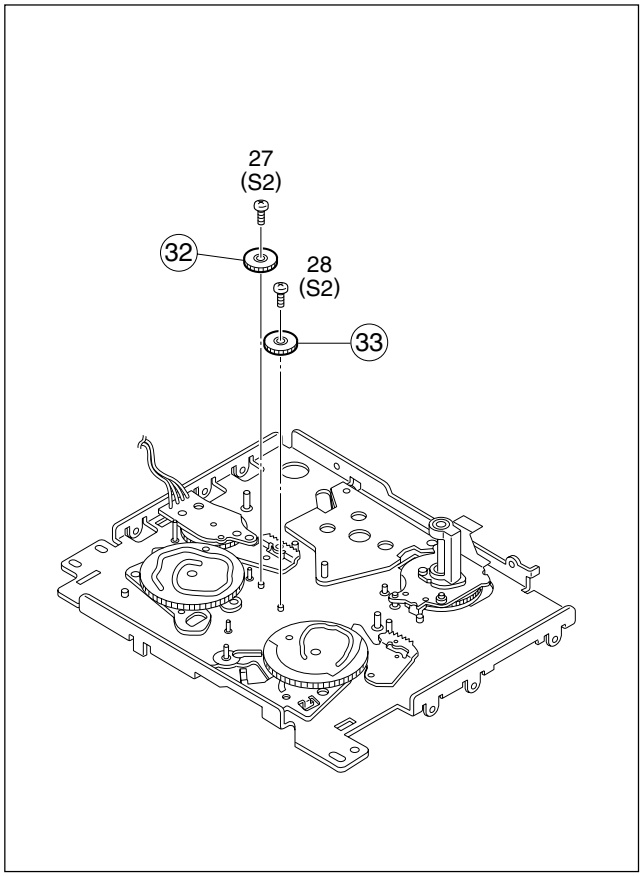
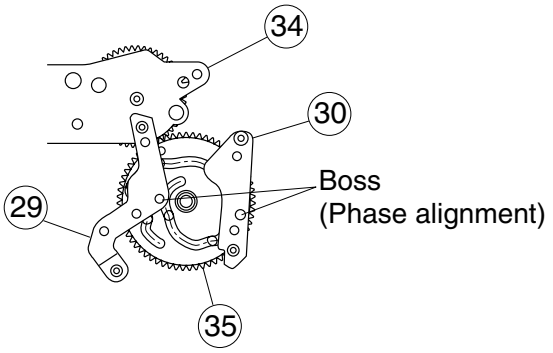


Fig. 2-13-12

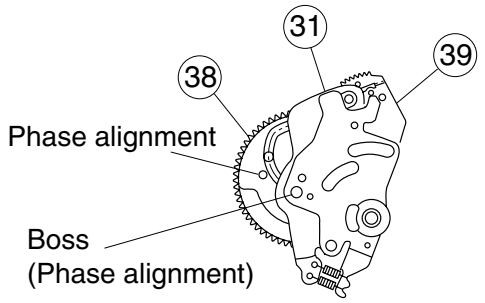
<Note 12> : How to attach the tension control arm assembly ㉙ / Brake control arm assembly ㉚ .



Align the phase of the main cam ㉟ , then attach it by fitting the bosses into the cam slot.

Fig. 2-13-11A

<Note 13> : How to attach the charge arm assembly ㉛ .



Align the phase of the sub cam ㊳ , then attach it by fitting the boss into the cam slot.

Fig. 2-13-11B

13. ㉞ Rotary encoder assembly / ㉟ Main cam / ㊱ Arm gear 1 assembly / ㊲ Centering arm assembly

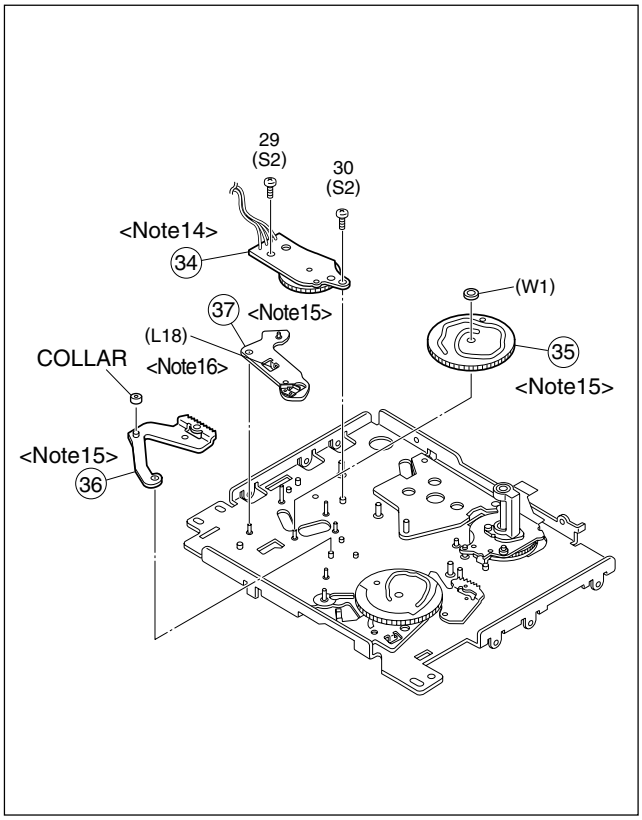
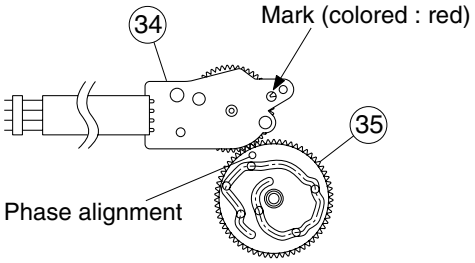


Fig. 2-13-13

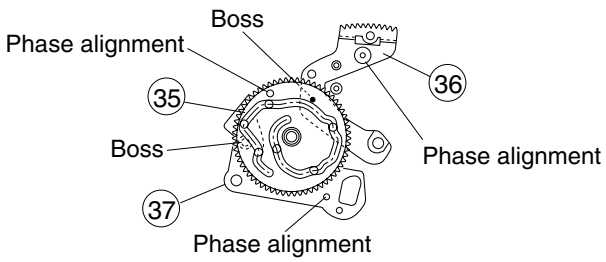
<Note 14> : How to attach the rotary encoder assembly ㉞ .



Align the phase of the main cam ㉟ , then attach it by placing the (red) coloured markings (on 2 gear teeth) within the encircled area.

Fig. 2-13-13A

<Note 15> : How to attach the main cam ㉟ .



Align the phases of the arm gear 1 assembly ㊱ and centering arm assembly ㊲, then attach the arm gear 1 assembly ㊱ /centering arm assembly ㊲ by fitting the bosses into the lower cam slot, and fit the slit washer.

Fig. 2-13-13B

<Note 16> : How to remove the centering arm assembly ㊲
The center arm assembly is located behind the mechanism assembly when the phase is aligned correctly. The center arm assembly can be removed by displacing it in the direction of the arrow.

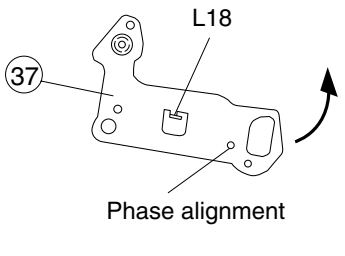


Fig. 2-13-13C

14. ㊳ Sub cam / ㊴ Arm gear 2 assembly / ㊵ Clutch lock lever assembly

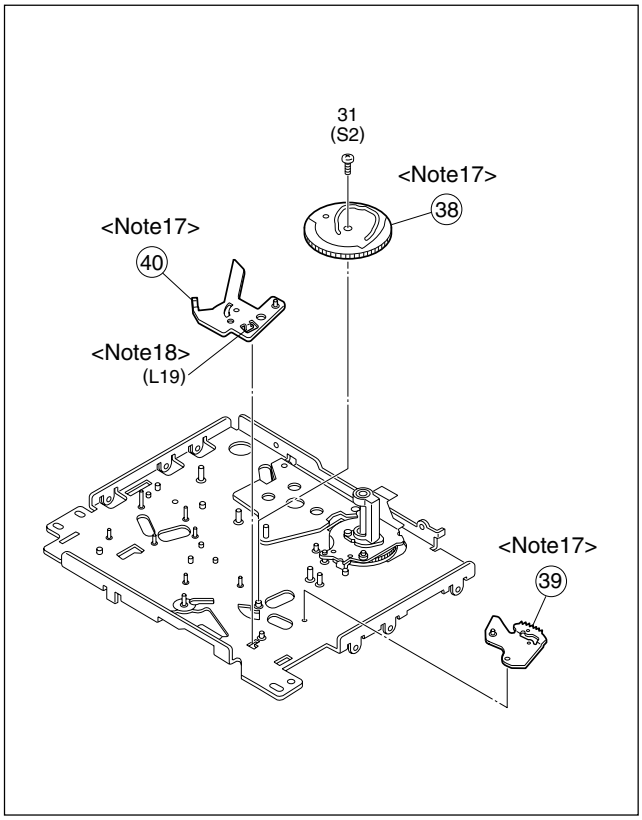


Fig. 2-13-14

15. ㊶ Capstan motor / ㊷ Drum base deck

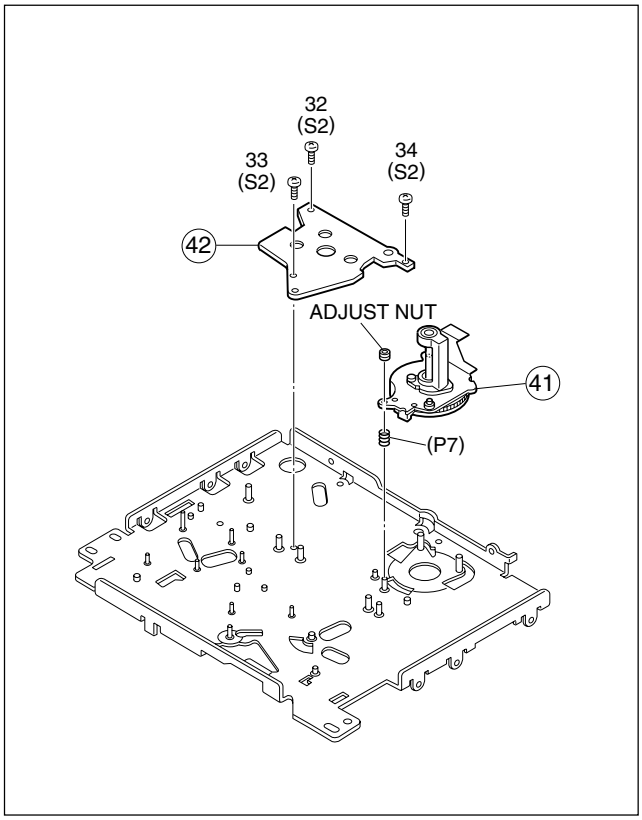
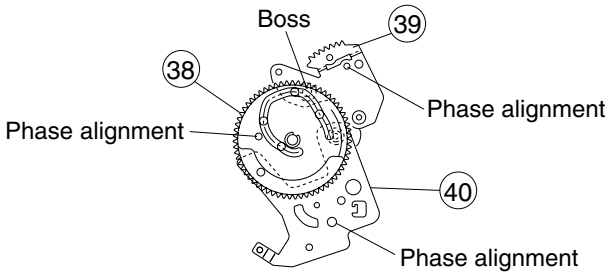


Fig. 2-13-15

<Note 17> : How to attach the sub cam ㊳ .



Align the phases of the arm gear 2 assembly ㊴ and clutch lock lever assembly ㊵ , then attach them by fitting the boss into the lower cam slot and tighten the screws.

Fig. 2-13-14A

<Note 18> : How to remove the clutch lock lever assembly ㊵
L19 is located behind the mechanism assembly when the phase is aligned correctly. The clutch lock lever assembly can be removed by displacing it in the direction of the arrow.

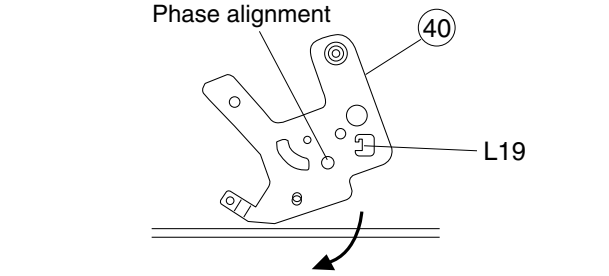
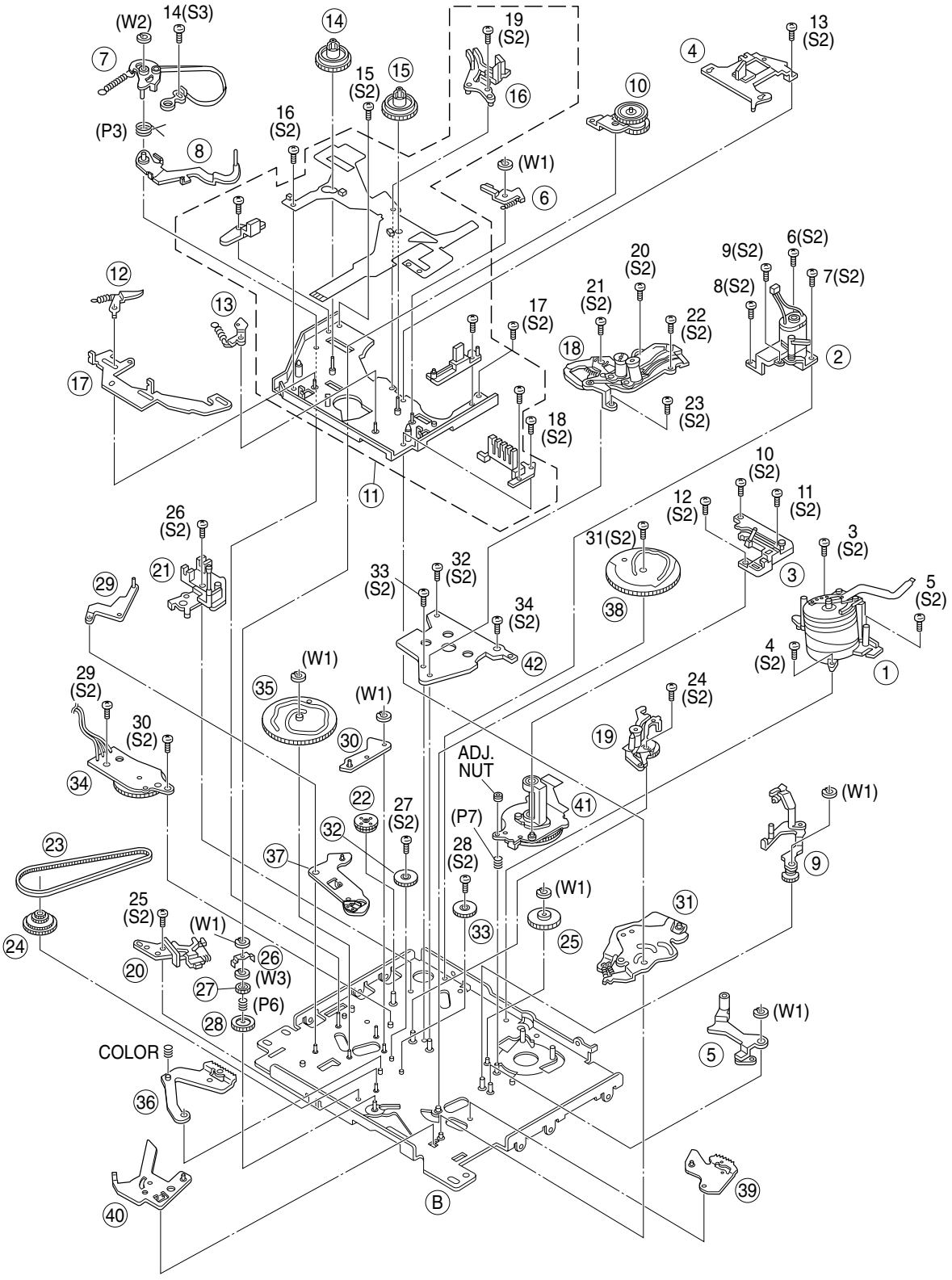


Fig. 2-13-14B

2.14 LIST OF PROCEDURES FOR DISASSEMBLY



Note :

- For the greasing and oiling locations, see “SECTION 5 PARTS LIST” (Page 5-6).

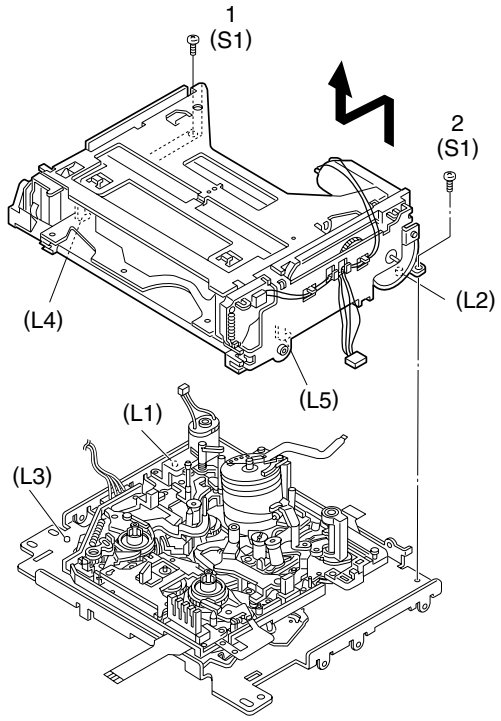
Fig. 2-14-1

2.15 MECHANISM DISASSEMBLY/ASSEMBLY SHEET

Screw Management Table

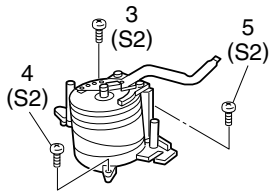
Fig. No.	Ⓐ		①			②				③			④	⑦	⑪			
No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Type	S1	S1	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S3	S2	S2	S2	S2
Attachin																		
Ref. Fig.	2-13-1		2-13-2							2-13-3				2-13-4	2-13-6			

Ⓐ Cassette housing assembly



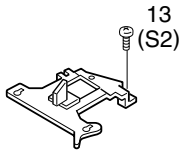
S1×2, L1-L5

① Drum assembly



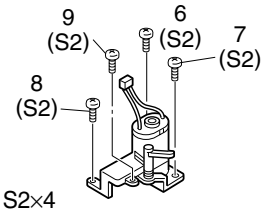
S2×3

④ Reel cover assembly



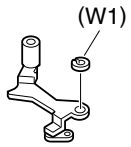
S2, L6×2

② Motor bracket assembly



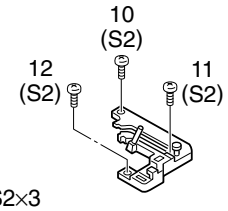
S2×4

⑤ Pinch roller arm assembly



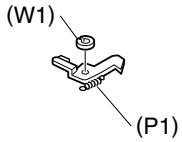
W1, L7

③ Middle catcher assembly



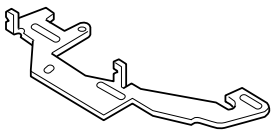
S2×3

⑥ Sub brake assembly



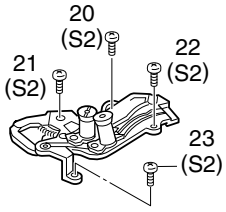
P1, W1, L8

⑰ Control plate



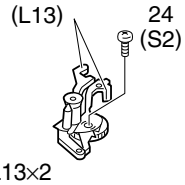
L12×2

⑱ Guide rail (Take up) assembly



S2×4

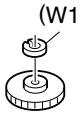
⑲ Guide rail (Sup) assembly



S2, L13×2

㉔ Center gear assembly

㉕ Reel drive pulley assembly

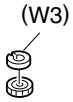


W1

㉖ Push plate

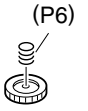
W1

㉗ Clutch lock gear (2)



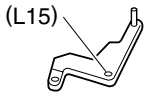
W3

㉘ Clutch lock gear (1)



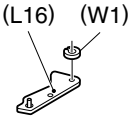
P6

㉙ Tension control arm assembly



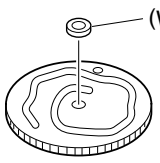
L15

㉚ Brake control arm assembly



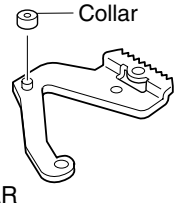
W1, L16

㉟ Main cam



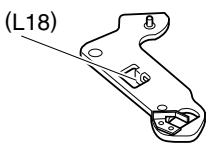
W1

㊱ Arm gear 1 assembly



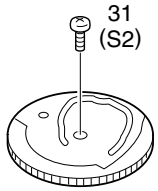
COLLAR

㊲ Centering arm assembly



L18

㊳ Sub cam

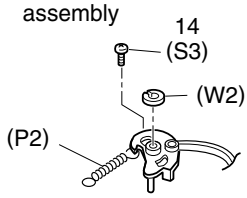


S2

Fig. 2-15-1A

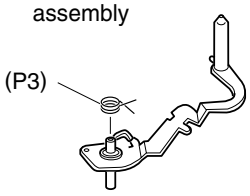
⑯	⑱				⑲	⑳	㉑	㉜	㉝	㉞		㊳	㊷		
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2
2-13-7	2-13-8						2-13-9	2-13-12		2-13-13		2-13-14	2-13-15		

⑦ Band arm plate sub assembly



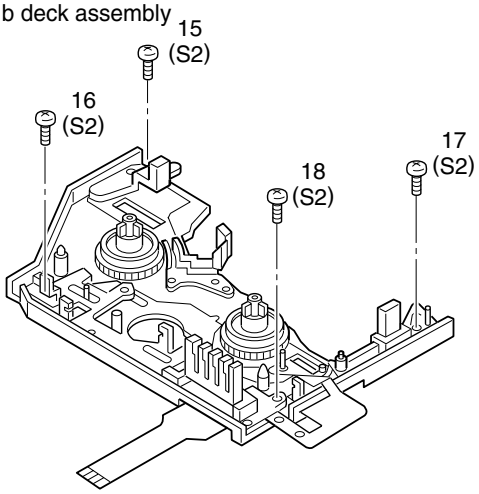
S3, P2, L9, W2

⑧ Tension arm sub assembly



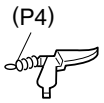
P3

⑪ Sub deck assembly



S2×4

⑫ Main Brake(Sup) assembly



P4, L10

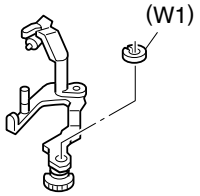
⑬ Main Brake(Take up) assembly

P5, L11

⑭ Reel disk assembly (Sup)

⑮ Reel disk assembly (Take up)

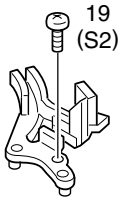
⑨ EXIT guide arm assembly



W1

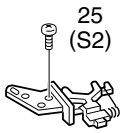
⑩ Swing arm assembly

⑯ Prism



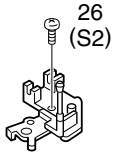
S2

⑳ Base plate assembly



S2, L14×2

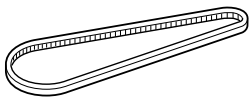
㉑ Ent. guide base assembly



S2

㉒ Worm wheel 2

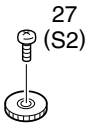
㉓ Timing belt



㉛ Charge arm assembly

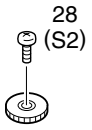
L17

㉜ Connect gear 2



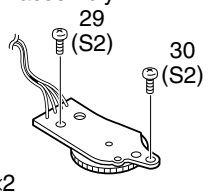
S2

㉝ Connect gear 2



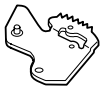
S2

㉞ Rotaly encoder assembly

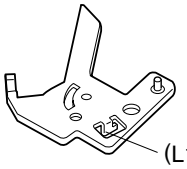


S2×2

㊴ Arm gear 2 assembly

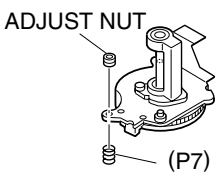


㊵ Clutch lock lever assembly



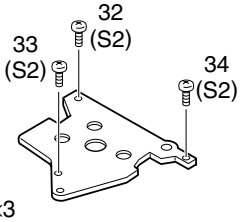
L19

㊶ Capstan motor



ADJUST NUT, P7

㊷ Drum base deck



S2×3

Fig. 2-15-1B

2.16 MECHANISM PHASE CHECK/ADJUSTMENT

See Fig. 2-16-1.

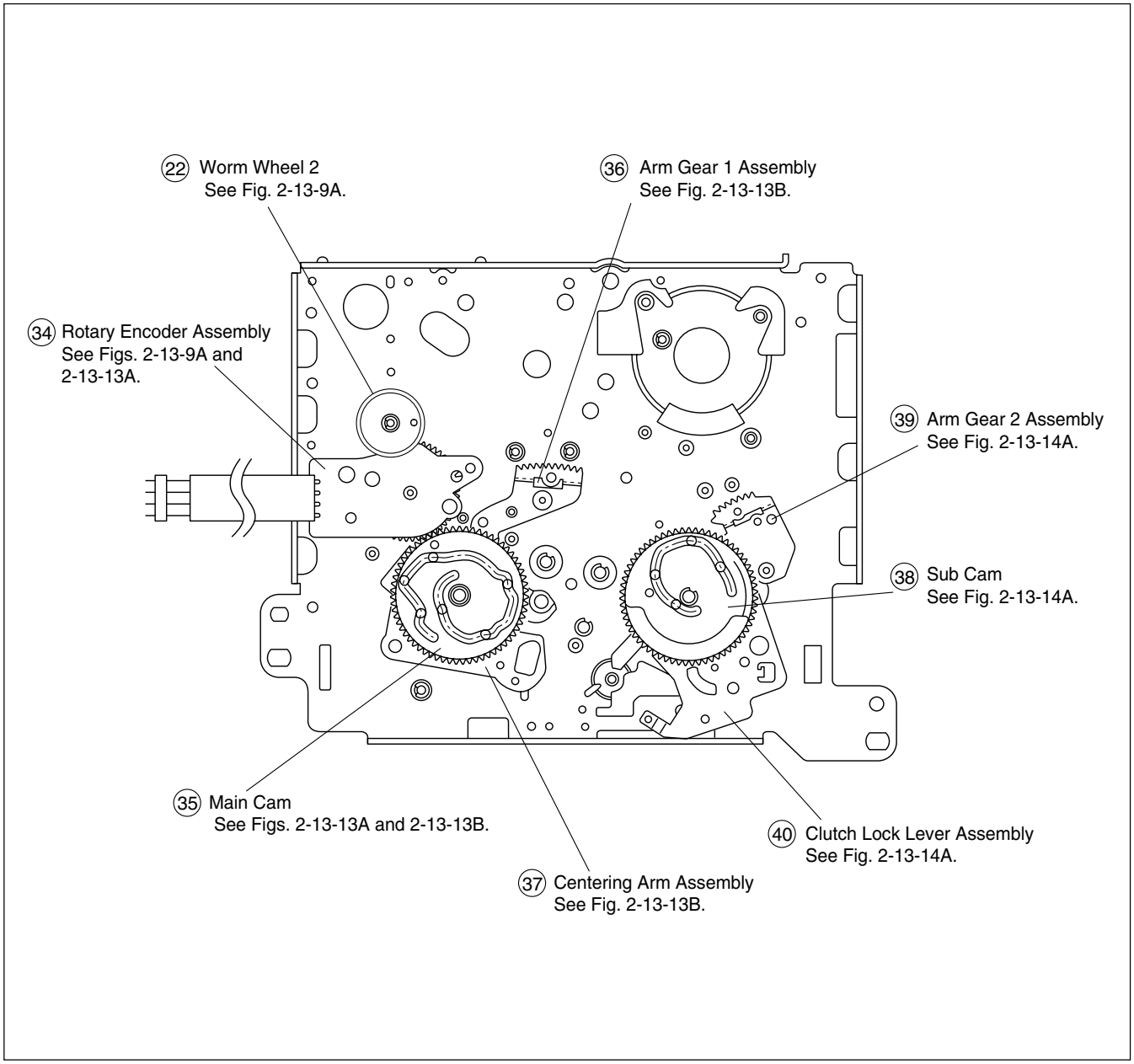


Fig. 2-16-1

2.17 POSITIONING THE TENSION POLE

See Fig. 2-17-1.

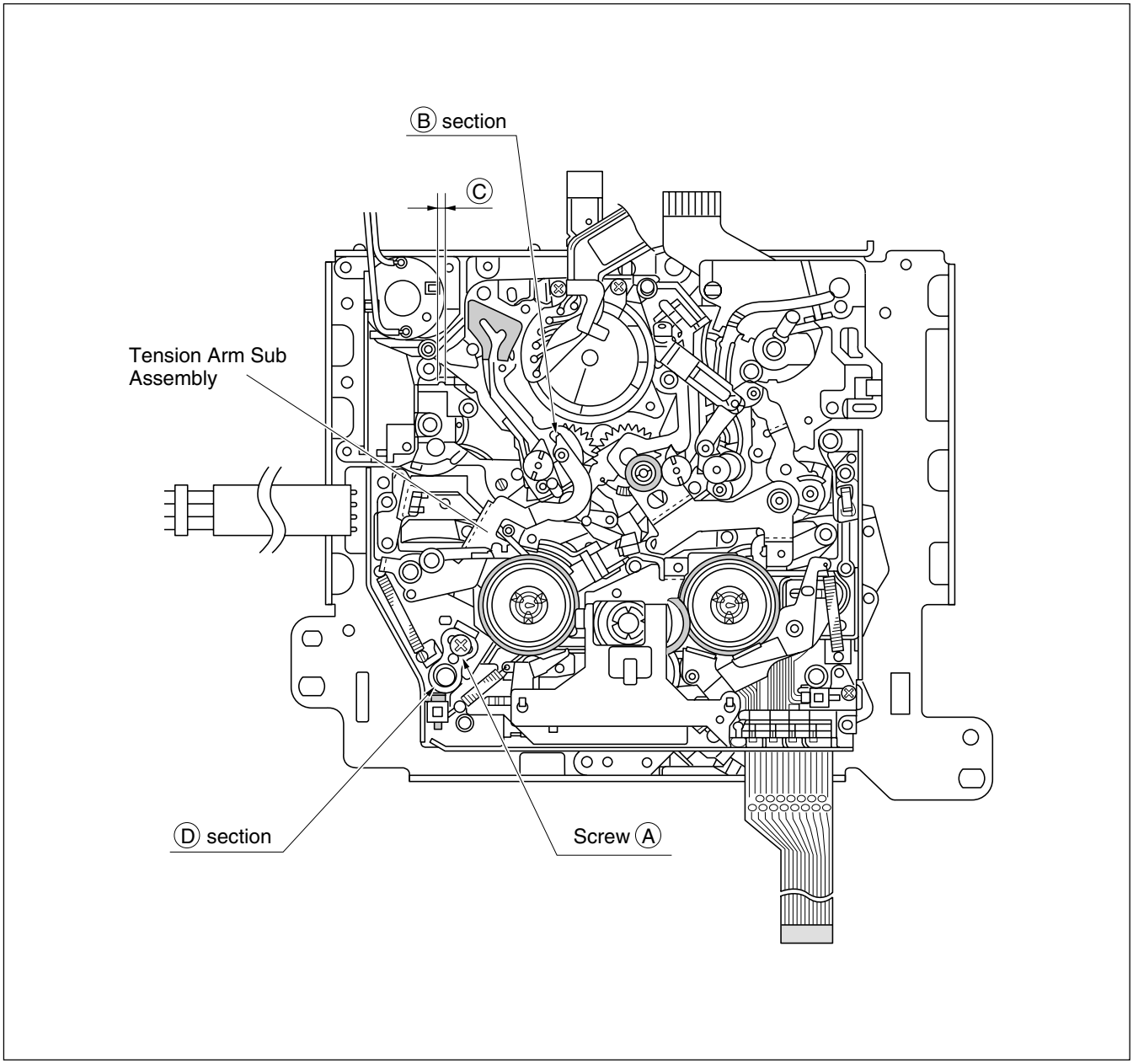


Fig. 2-17-1

Adjustment Method

Note:

• Remove the cassette housing assembly in advance.

1. Set the mechanism mode to the PLAY mode. (See pages 2-20 and 21.)
2. Loosen a screw Ⓐ.
3. Check the location of the tip (section Ⓑ) of the tension arm assembly to make sure that it is within area Ⓒ . If it is located outside, turn part Ⓓ to bring it within the specified area.
4. Tighten the screw Ⓐ.

Note : ***Tightening torque for the screw Ⓐ : 0.06 Nm (0.6 kgfcm)***

2.18 COMPATIBILITY AND ERROR RATE ADJUSTMENTS

2.18.1 Preparation

Before disassembly and adjustment, back up the data stored in the EEPROM (IC1007 on the DV MAIN board) using the Service Support System Software (SSS software).

Table 2-18-1 shows the important service points for the compatibility and error rate adjustments.

Adjustment Item / Service Point	Linearity Adjustment	PB Switching Point Adjustment	Error Rate Adjustmenmt
Drum replacement	Required Note 1	Required	Required
Transport part replacement	Required Note 1	Not	Check
Transport part (drum) repair	Required Note 1	Not	Check
IC5001 (PRE/REC amp on PRE/REC MDA board) replacement	Not	Not	Check
IC2001 (PB. EQ on DV MAIN board) replacement	Not	Not	Required
DV MAIN board replacement Note 2	Not	Required	Required

Table 2-18-1

Note 1 :

- The linearity adjustment is required only after servicing or replacing the drum or the take up/supply guide rail.

Note 2 :

- After replacing the DV MAIN board, write the original data in the EEPROM of the new board. If write communication is not possible, mount the original EEPROM on the new board.

When adjustments of more than one item are required, use the following order for the adjustments.

2.18.3 Linearity Adjustment
↓
2.18.4 PB Switching Point Adjustment
↓
2.18.5 Error Rate Adjustment

2.18.2 Adjustment

The actual adjustment requires the following preparation.

1. Tools required for adjustment

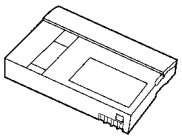
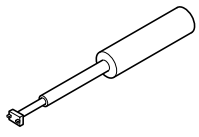
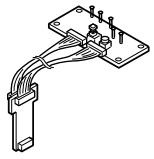
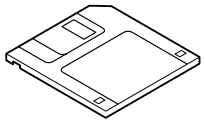
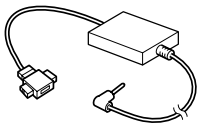
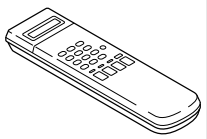
Alignment tape US : MC-1 PAL : MC-2	Guide driver YTU94085	Jig connector cable PTU94018B
		
SSS software PTU94016-3	PC cable US : QAM0099-002 PAL : QAM0099-005	Jig RCU PTU94023B
		

Fig. 2-18-1

2. Procedure

1. Take out the 7 screws (1 to 7), then remove the top cover. (See Fig. COM1 on page 1-3 of section 1.5.)
2. Connect the jig connector cable to CN1101 on the DV MAIN board.

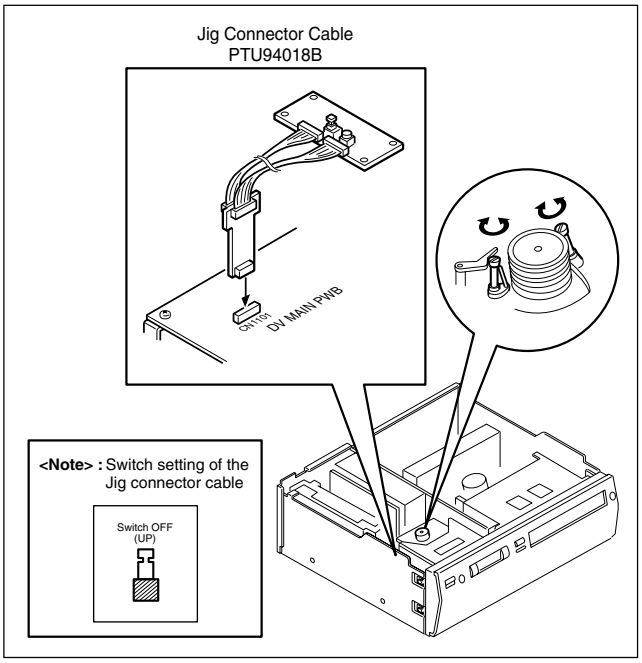


Fig. 2-18-2

3. Setup for computer adjustment

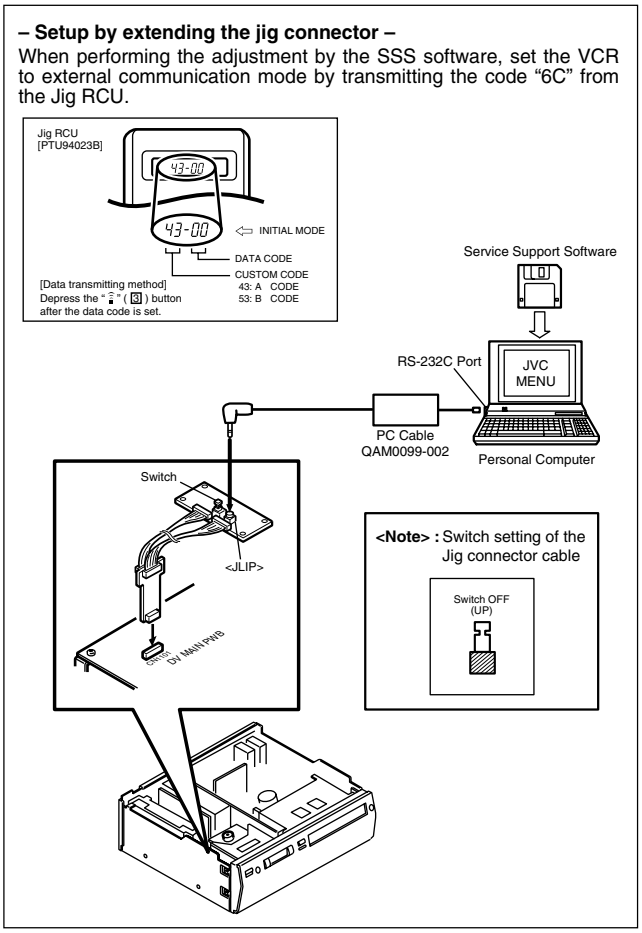
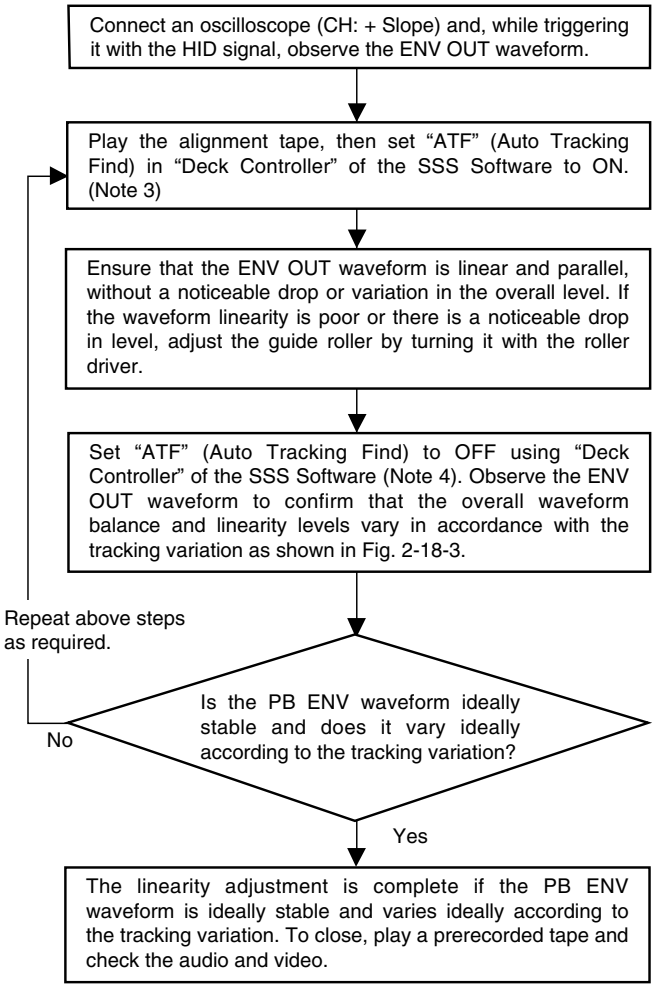

– Setup by extending the jig connector –
When performing the adjustment by the SSS software, set the VCR to external communication mode by transmitting the code “6C” from the Jig RCU.
Jig RCU [PTU94023B]
43-00
43-00
INITIAL MODE
DATA CODE
CUSTOM CODE
43: A CODE
53: B CODE
[Data transmitting method]
Depress the “ ” ( ) button after the data code is set.
Service Support Software
RS-232C Port
JVC MENU
PC Cable QAM0099-002
Personal Computer
Switch
<JLIP>
CN1101
DV MAIN PWB
<Note> : Switch setting of the Jig connector cable
Switch OFF (UP)

Fig. 2-18-3

2.18.3 Linearity adjustment

The following flowchart shows the linearity check/adjustment procedure.


Connect an oscilloscope (CH: + Slope) and, while triggering it with the HID signal, observe the ENV OUT waveform.
Play the alignment tape, then set “ATF” (Auto Tracking Find) in “Deck Controller” of the SSS Software to ON. (Note 3)
Ensure that the ENV OUT waveform is linear and parallel, without a noticeable drop or variation in the overall level. If the waveform linearity is poor or there is a noticeable drop in level, adjust the guide roller by turning it with the roller driver.
Set “ATF” (Auto Tracking Find) to OFF using “Deck Controller” of the SSS Software (Note 4). Observe the ENV OUT waveform to confirm that the overall waveform balance and linearity levels vary in accordance with the tracking variation as shown in Fig. 2-18-3.
Repeat above steps as required.
Is the PB ENV waveform ideally stable and does it vary ideally according to the tracking variation?
No
Yes
The linearity adjustment is complete if the PB ENV waveform is ideally stable and varies ideally according to the tracking variation. To close, play a prerecorded tape and check the audio and video.

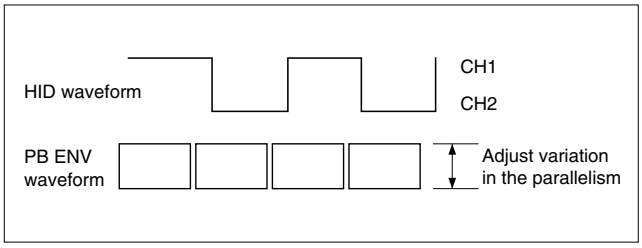


Fig. 2-18-4 PB ENV Waveform

Note 3 :

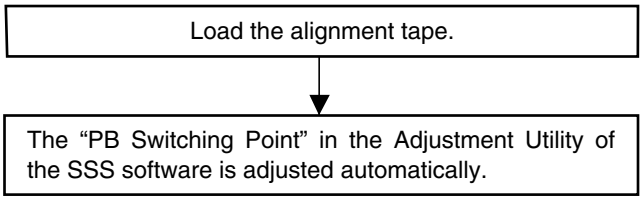
- The VHS section has an A/C head, and the first tracking position can be locked using the CTL pulse and drum FF when AT is off. Therefore, the linearity of the VHS section can usually be adjusted with AT off. However, this adjustment method is not available with the DV section, which does not have the A/C head. If ATF is turned off, the DV section performs tracking only of the speed system. Therefore, as time passes, the servo will be lost and the linearity adjustment will become difficult.

Note 4 :

- Since the speed servo function is active when ATF is off, there will be no problem even if the DVC ATF function is off, provided that it is for a few minutes.

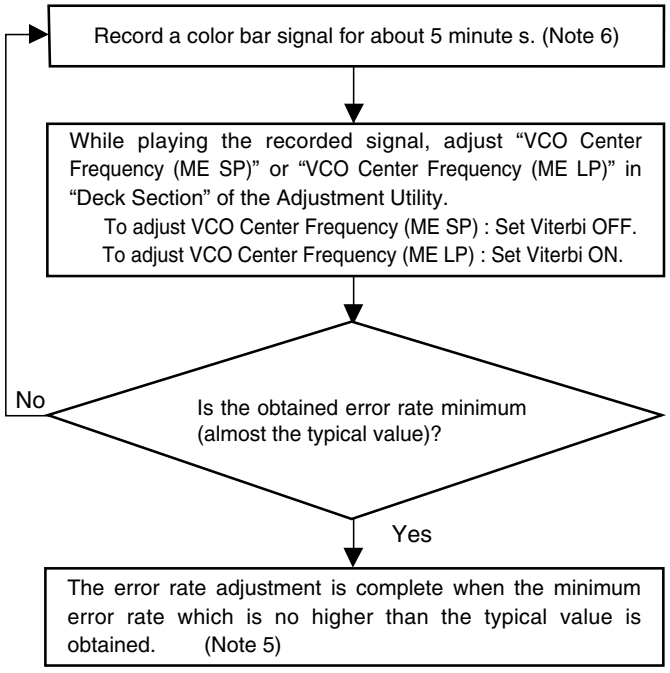
2.18.4 PB switching point adjustment

The following flowchart shows the PB switching point adjustment procedure.


Load the alignment tape.
The “PB Switching Point” in the Adjustment Utility of the SSS software is adjusted automatically.

2.18.5 Error rate adjustment

The following flowchart shows the error rate adjustment procedure.


Record a color bar signal for about 5 minute s. (Note 6)
While playing the recorded signal, adjust “VCO Center Frequency (ME SP)” or “VCO Center Frequency (ME LP)” in “Deck Section” of the Adjustment Utility.
To adjust VCO Center Frequency (ME SP) : Set Viterbi OFF.
To adjust VCO Center Frequency (ME LP) : Set Viterbi ON.
Is the obtained error rate minimum (almost the typical value)?
No
Yes
The error rate adjustment is complete when the minimum error rate which is no higher than the typical value is obtained. (Note 5)

Note 5 :

- The “typical value” refers to the following:
  CH1 or CH2: < 498.; with Viterbi OFF. Inter-channel difference: < 10 times between CH1 and CH2.

Note 6 :

- It is desirable to use a brand-new tape or an unused section of tape. This is to assure the adjustment reliability because using a damaged tape increases the error rate.

2.18.6 Error rate measuring method

It is not necessary to use the error rate jig (YTU93083) or a frequency counter. The Service Support System Software displays the error rates of video CH1, CH2 and totals. When measuring the error rate of a channel, be sure to total the values of the video and the audio errors.

2.19 TAPE EJECTION

If a loaded cassette tape cannot be ejected due to a failure in the electrical circuitry, take the cassette tape out using the following procedure.
However, this method consists of a forced driving of the loading motor. Therefore, the following description assumes that there is no trouble in the mechanism operations.

1. Unplug the power plug from the power outlet, then remove the top cover.
2. Apply 3 V DC to the electrodes (Red wire: + pole. Brown wire: - pole) on the upper part of the loading motor to perform the unloading operation so that the pole base assemblies are returned on the inner side of the tape. At this time, the exit guide arm assembly should return toward the drum assembly and the mechanism should enter the C-IN mode.
   As the tape is left without winding, be careful not to damage the tape or leave grease on it.
3. If the tape is slack, wind it up by turning the shaft on the topside of the capstan motor in the direction of the arrow using a pointed tool (chip IC replacement jig).
   This operation may be difficult because the shaft is located below the housing motor of the cassette housing assembly. Be careful not to damage parts during it.
4. After confirming that the tape is fully wound up, take out the cassette tape by turning the gear of the cassette housing assembly in the direction of the arrow.

Note :

- ***After ejecting the tape, check that grease or similar foreign material is not attached to the wound tape. Also perform similar checking for the mechanism assembly, particularly the tape transport system.***

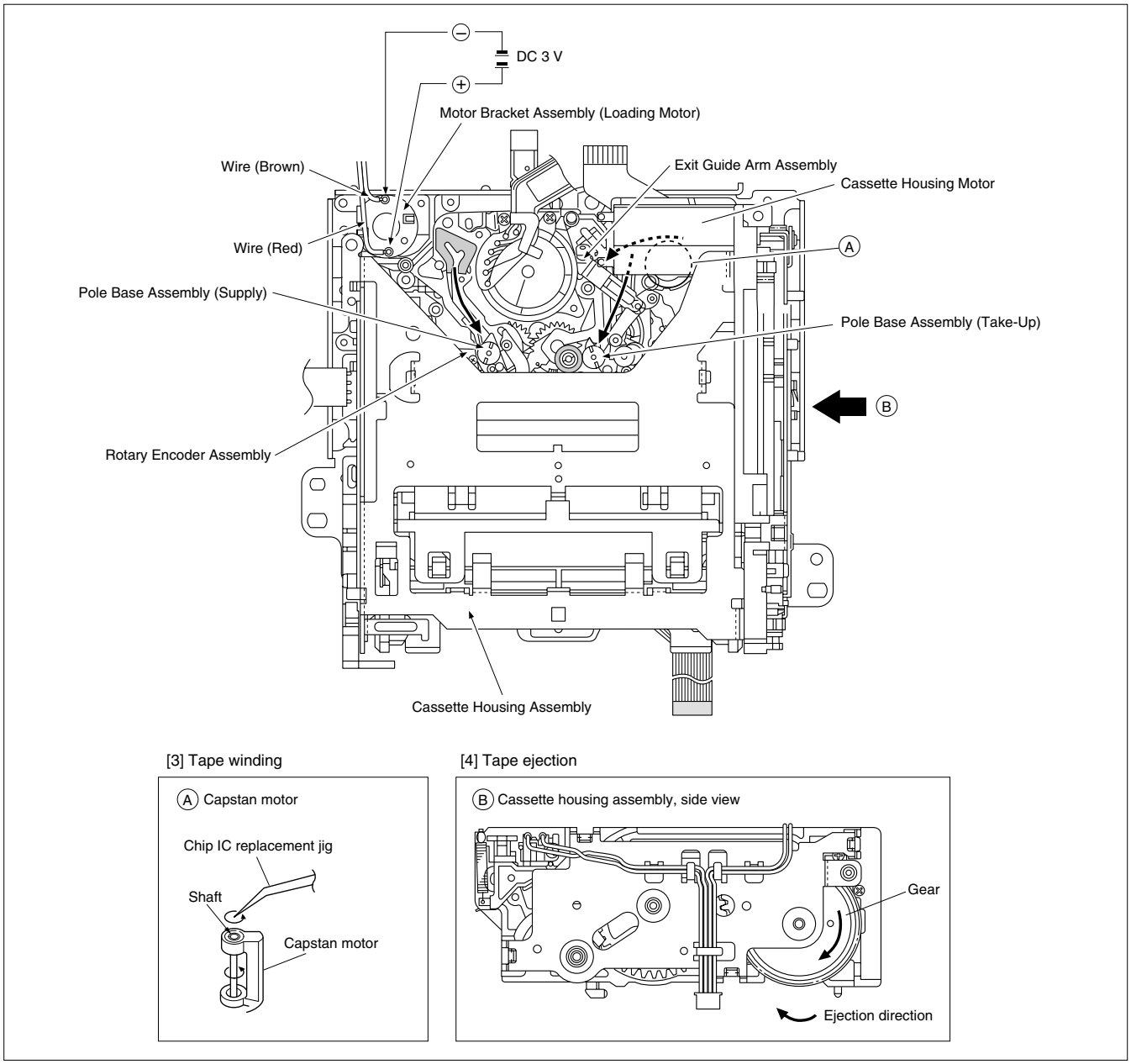


Fig. 2-19-1

SECTION 3
ELECTRICAL ADJUSTMENT (VHS)

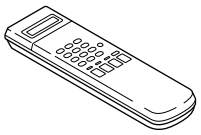
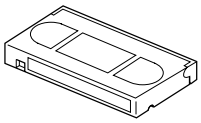
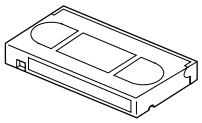
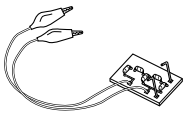
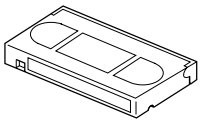
3.1 PRECAUTION

The following adjustment procedures are not only necessary after replacement of consumable mechanical parts or board assemblies, but are also provided as references to be referred to when servicing the electrical circuitry.
In case of trouble with the electrical circuitry, always begin a service by identifying the defective points by using the measuring instruments as described in the following electrical adjustment procedures. After this, proceed to the repair, replacement and/or adjustment. If the required measuring instruments are not available in the field, do not change the adjustment parts (variable resistor, etc.) carelessly.

3.1.1 Required test equipments

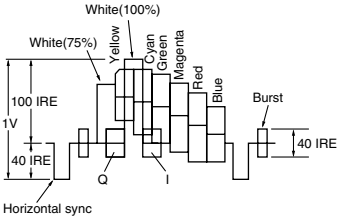
- Color (colour) television or monitor
- Oscilloscope: wide-band, dual-trace, triggered delayed sweep
- Frequency counter
- Audio level meter
- Signal generator: RF / IF sweep / marker
- Signal generator: stairstep, color (colour) bar [NTSC]
- Recording tape
- Digit-key remote controller(provided)

3.1.2 Required adjustment tools

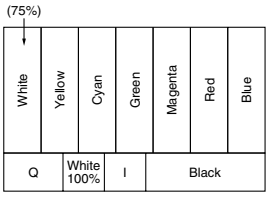
Jig RCU PTU94023B	Alignment tape (SP, stairstep, NTSC) MHP	Alignment tape (EP, stairstep, NTSC) MHP-L
		
LPF PTU93006	Alignment tape (S-VHS, SP/EP, color (colour) bar) MH-1H	
		

3.1.3 Color (colour) bar signal,Color (colour) bar pattern

● **Color bar signal [NTSC]**



● **Color bar pattern [NTSC]**



3.1.4 Switch settings and standard precautions

The SW settings of the VCR and the standard precautions for the electrical adjustments are as follows.

- ***When using the Jig RCU, set its custom code to match the custom code of the VCR.***

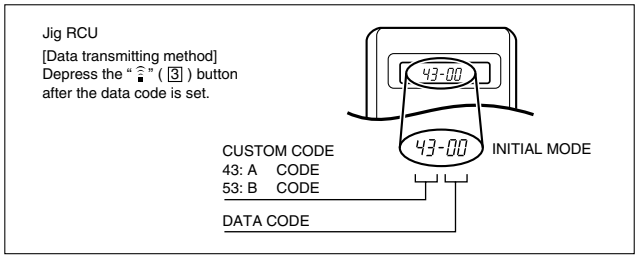


Fig. 3-1-4a Jig RCU [PTU94023B]

- ***Set the switches as shown below unless otherwise specified on the relevant adjustment chart. The switches that are not listed below can be set as desired.***
  If the VCR is not equipped with the functions detailed below, setup is not required.

AUTO PICTURE/VIDEO CALIBRATION/ B.E.S.T./D.S.P.C.	OFF
PICTURE CONTROL/SMART PICTURE	NORMAL/NATURAL
VIDEO STABILIZER	OFF
TBC	ON
Digital 3R	ON
VIDEO NAVIGATION/TAPE MANAGER	OFF

- ***Unless otherwise specified, all measuring points and adjustment parts are located on the Main board.***
- ***In the Signal column of the adjustment chart, "Ext. S-input" means the Y/C separated video signal and "Ext. input" means the composite video signal input.***

3.1.5 EVR Adjustment

Some of the electrical adjustments require the adjustment performed by the EVR system. The Main board assembly have EEPROMs for storing the EVR adjustment data and user setups.

Notes:

- ***In the EVR adjustment mode, the value is varied with the channel buttons (+, –). The adjusted data is stored when the setting mode changes (from PB to STOP, when the tape speed is changed, etc.). Take care to identify the current mode of each adjustment item when making an adjustment.***
- ***When changing the address setting in the EVR adjustment mode, use the Jig RCU or the remote controller having numeric keypad with which a numeric code can be directly input.***
  The remote control code of the Jig RCU corresponds to each of the digit keys on the remote controller as follows.

Digit-key	0	1	2	3	4	5	6	7	8	9
Code	20	21	22	23	24	25	26	27	28	29

- ***As the counter indication and remaining tape indication are not displayed FDP during the EVR adjustment mode, check them on the TV monitor screen.***
- ***When performing the EVR adjustment, confirm that the FDP indication is changed to the EVR mode, as shown below.***

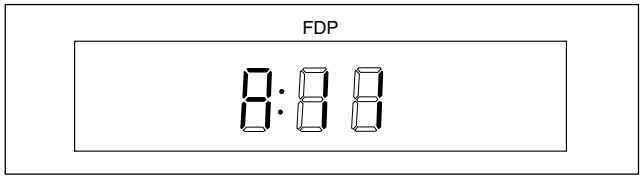


Fig. 3-1-5a EVR mode

3.2 SERVO CIRCUIT

3.2.1 Switching point

Signal	(A1) (A2)	• Stairstep signal • Alignment tape(SP, stairstep, NTSC) [MHP]
Mode	(B)	• PB • TBC: OFF
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• VIDEO OUT terminal (75Ω terminated) • TP106 (PB. FM)
External trigger	(E)	• TP111 (D.FF)/slope : –
Adjustment part	(F)	• Jig RCU: Code “51” or “52”
Specified value	(G)	• 8.0 ± 0.5H
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Play back the signal (A1) of the alignment tape (A2).
(2) Apply the external trigger signal to D.FF (E) to observe the VIDEO OUT waveform and V.PB FM waveform at the measuring points (D1) and (D2).
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Adjust tracking by pressing the channel buttons (+, –) so that the V.PB FM waveform becomes maximum.
(5) Transmit the code (F) from the Jig RCU to adjust so that the trigger point of the VIDEO OUT waveform is changed from the trailing edge of the V.sync signal becomes the specified value (G).
(6) Set the VCR to the stop mode or eject mode.

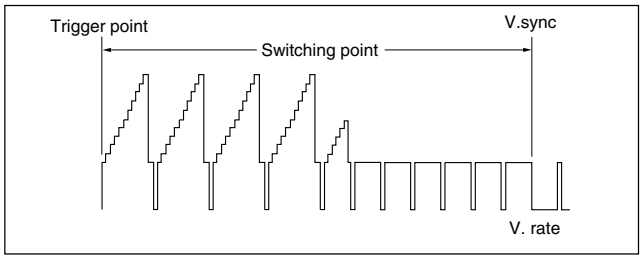


Fig. 3-2-1a Switching point

3.2.2 Slow tracking preset

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [NTSC]
Mode	(B1) (B2)	• S-VHS SP • S-VHS EP
Measuring point	(D)	• TV-Monitor
Adjustment part	(F)	• Jig RCU: Code “71“ or “72”
Specified value	(G)	• Minimum noise
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Record the signal (A2) in the mode (B1), and play back the recorded signal.
(2) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(3) Set the VCR to the FWD slow mode.
(4) Transmit the code (F) from the Jig RCU to adjust so that the noise bar becomes the specified value (G) on the TV monitor in the slow mode.
(5) Set the VCR to the Stop mode.
(6) Confirm that the noise bar is (G) on the TV monitor in the slow mode.
(7) Repeat steps (3) to (6) in the REV slow mode.
(8) Repeat steps (1) to (7) in the mode (B2).

Note:

- ***For FWD slow (+1/6×) playback, transmit the code “08” from the Jig RCU to enter the slow playback mode, and transmit the code “D0” for REV slow (–1/6×) mode.***

3.3 VIDEO CIRCUIT

3.3.1 D/A level

Signal	(A1) (A2) (A3)	• Ext. S-input / Ext. input • Color (colour) bar signal [NTSC] • S-VHS tape
Mode	(B)	• S-VHS • EE
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• VIDEO OUT terminal (75Ω terminated)
Adjustment part	(F)	• VR1401 (D/A LEVEL ADJ) [3D DIGITAL/4M board]
Specified value (Note)	(G)	• 1.00 ± 0.015 Vp-p (reference value)

(1) Insert the cassette tape (A3) to enter the mode (B).
(2) Observe the VIDEO OUT waveform at the measuring point (D).
(3) Check the Y level value when the External S-input (Y/C separated video signal).
(4) Switch the input signal to the External input (composite video signal), and adjust the adjustment part (F) so that the Y level becomes the same value observed in step (3).

Note:

- ***The specified value (G) is just a reference value to be obtained when the External S-Video (Y/C separated video) signal is input. In actual adjustment, set it to the value observed in step (3).***

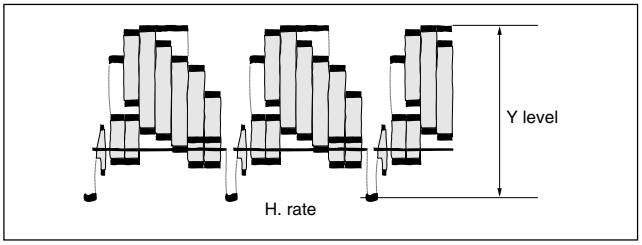


Fig. 3-3-1a D/A level

3.3.2 EE Y level

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [NTSC]
Mode	(B)	• EE
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• Y OUT terminal (75Ω terminated)
EVR mode	(F1)	• Jig RCU: Code “57”
EVR address	(F2)	• A:11 (Press remote controller “1” key twice)
Specified value	(G)	• 1.00 ± 0.03 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Observe the Y OUT waveform at the measuring point (D).
(2) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(3) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(4) Adjust with the channel buttons (+, –) on the VCR (or on the remote controller) so that the Y level of the Y OUT waveform becomes the specified value (G).
(5) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

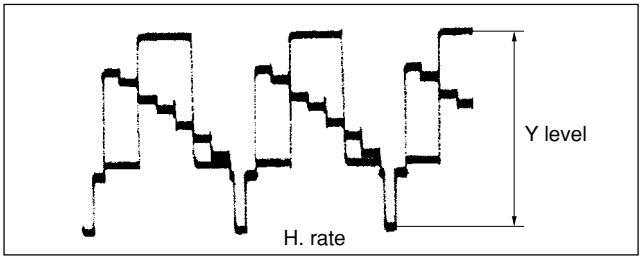


Fig. 3-3-2a EE Y level

3.3.3 PB Y level (S-VHS / VHS)

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [NTSC]
Mode	(B1) (B2)	• S-VHS SP • VHS SP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• Y OUT terminal (75Ω terminated)
EVR mode	(F1)	• Jig RCU: Code “57”
EVR address	(F2)	• A:11 (Press remote controller “1” key twice)
Specified value	(G)	• 1.00 ± 0.03 Vp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Observe the Y OUT waveform at the measuring point (D).
(2) Record the signal (A2) in the mode (B1), and play back the recorded signal.
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(6) Adjust with the channel buttons (+, –) on the VCR (or on the remote controller) so that the Y level of the Y OUT waveform becomes the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(8) Repeat steps (2) to (7) in the mode (B2).

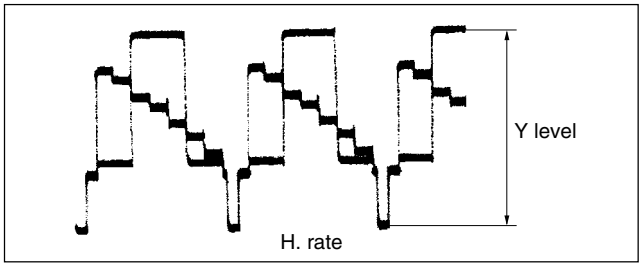


Fig. 3-3-3a PB Y level

3.3.4 REC color (colour) level

Signal	(A1) (A2) (A3)	• Alignment tape(S-VHS, SP/EP, Color(colour) bar) [MH-1H] • Ext. input • Color (colour) bar signal [NTSC]
Mode	(B1) (B2)	• S-VHS SP • S-VHS EP
Equipment	(C)	• Oscilloscope
Measuring point	(D1) (D2)	• TP106 (PB. FM) • PB color (colour) output of the LPF
External trigger	(E)	• TP111 (D.FF)
EVR mode	(F1)	• Jig RCU: Code “57”
EVR address	(F2)	• A:02 (Press remote controller “0” and “2” keys)
Specified value	(G)	• SP: “B” x 125 ± 5% • EP: “B” x 125 ± 5%
Adjustment tool	(H1) (H2) (H3)	• Jig RCU [PTU94023B] • Digit-key remote controller • LPF [PTU93006] (See Fig. 3-3-4a.)

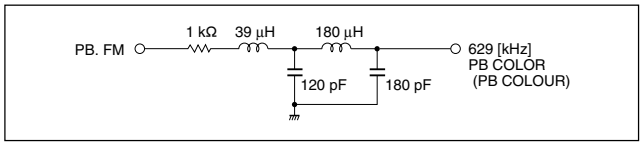


Fig. 3-3-4a LPF

(1) Connect the adjustment tool (H3) to the measuring point (D1).
(2) Apply the external trigger signal to D.FF (E) to observe the PB color (colour) waveform at the measuring point (D2).
(3) Play back the signal (A3) in the mode (B1) of the alignment tape (A1).
(4) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(5) Adjust tracking by pressing the channel buttons (+, –) so that the PB color (colour) waveform becomes maximum. Make a note of the higher PB color (colour) level as “B” at this time.
(6) Record the signal (A3) in the mode (B1), and play back the recorded signal.
(7) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(8) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(9) Adjust with the channel buttons (+, –) on the VCR (or on the remote controller) so that the higher level channel becomes the specified value (G) of the note "B" level as shown in Fig. 3-3-4b. (Adjust before recording, then confirm it by playing back.)

(10) After adjustment, record the signal (A3) then playing it back again. At this time, confirm that there is no inverting phenomenon or noise appearing on the playback screen.
(11) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(12) Repeat steps (3) to (11) in the mode (B2).

Note:

- ***After adjusting, always perform the confirmation and re-adjustment of the item 3.4.1.***

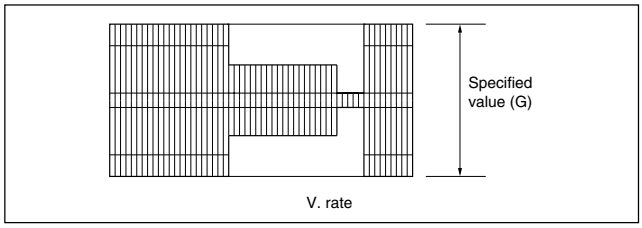


Fig. 3-3-4b REC color (colour) level

3.3.5 Video EQ (Frequency response)

Signal	(A1) (A2)	• Ext. S-input • Video sweep signal
Mode	(B1) (B2) (B3)	• S-VHS SP • S-VHS EP • Picture Control / Smart Picture REC : Normal / Natural PB : Edit / Distinct
Equipment	(C)	• Oscilloscope
Measuring point	(D1)	• Y OUT terminal (75Ω terminated)
Frequency marker	(D2)	• 3 [MHz]
External trigger	(E)	• TP111 (D.FF)
EVR mode	(F1)	• Jig RCU: Code “57”
EVR address	(F2)	• A:03 (Press remote controller “0” and “3” keys)
Specified value	(G)	• SP: 3.2 ± 0.2 div. (–2 ± 0.5 dB) • EP: 2.8 ± 0.2 div. (–3 ± 0.5 dB)
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Apply the external trigger signal to D.FF (E) to observe the Y OUT waveform at the measuring point (D1).
(2) Record the signal (A2) in the mode (B1), and play back the recorded signal.
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(5) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(6) Set the slope of the oscilloscope to the channel having higher (D2) marker level of the Y OUT waveform [signal (A2)]. Then set the 100 kHz marker level to the “4” scale on the oscilloscope. In this condition, adjust with the channel buttons (+, –) on the VCR (or on the remote controller) so that the (D2) marker level reaches the specified value (G).
(7) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(8) Repeat steps (2) to (7) in the mode (B2).

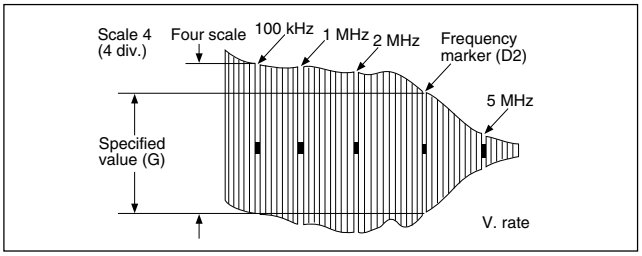


Fig. 3-3-5a Video EQ (Frequency Response)

3.3.6 AUTO PICTURE initial setting

Signal	(A1) (A2) (A3)	• Ext. input • Video: Optional • VHS tape
Mode	(B)	• EE → Auto adjust (SP/EP REC → PB)
Adjustment part	(F)	• Jig RCU : Code “58”
Specified value	(G)	• STOP mode
Adjustment tool	(H)	• Jig RCU [PTU94023B]

(1) Insert the cassette tape (A3).
(2) Set the VCR to the Auto adjust mode by transmitting the code (F) from the Jig RCU. When the VCR enters the stop mode, the adjustment is completed. When the VCR enters the eject mode, repeat steps (1) to (2) again.

3.3.7 DV EE Y level

Signal	(A1) (A2)	• Ext. input • Color (colour) bar signal [NTSC]
Mode	(B)	• VHS • EE
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP701 (DV AGC)
Adjustment part	(F)	• VR701 (DV AGC)
Specified value	(G)	• 1.00 ± 0.02 Vp-p

(1) Observe the VIDEO OUT waveform at the measuring point (D).
(2) Adjust the adjustment part (F) so that the Y level of the VIDEO OUT waveform becomes the specified value (G).

Note:

- ***After adjusting, always perform the confirmation and re-adjustment of the Electrical adjustment (DV).***

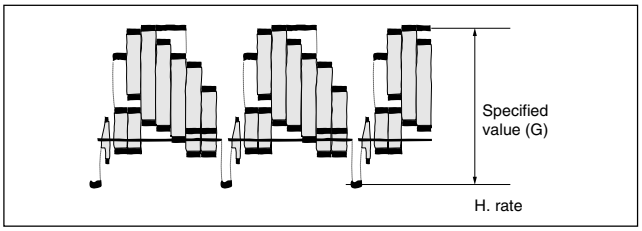


Fig. 3-3-7a DV EE Y level

3.4 AUDIO CIRCUIT

Notes:

- ***This adjustment should be done after the "REC color (colour) level adjustment" for the video circuit has been completed.***
- ***GND (Ground) should be taken from the Tuner shield case.***

3.4.1 Audio REC FM

Signal	(A1) (A2) (A3)	• Ext. input • Audio: No signal • Video: Color (colour) bar signal [NTSC]
Mode	(B)	• S-VHS EP
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• TP2253 (A. FM)
External trigger	(E)	• TP111 (D.FF)
EVR mode	(F1)	• Jig RCU: Code "57"
EVR address	(F2)	• A: 30 (Press remote controller "3" and "0" keys.)
Specified value	(G1) (G2)	• 500 ± 100 mVp-p • More than 350 mVp-p
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Apply the external trigger signal to D.FF (E) to observe the Audio PB FM waveform at the measuring point (D).
(2) Record the signal (A3) with no audio signal input in the mode (B), and play back the recorded signal.
(3) Press the channel buttons (+, –) simultaneously to enter the manual tracking mode. This also brings tracking to the center (centre).
(4) If the A.PB FM level is not within the specified value (G1), perform the adjustment in a following procedure.
(5) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(6) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(7) Adjust with the channel buttons (+, –) on the VCR (or on the remote controller) so that the A.PB FM level of the higher channel level becomes the specified value (G1). (Adjust before recording, then confirm it by playing back.)
(8) If the specified value (G1) is not obtained, adjust with the channel buttons (+, –) so that the waveform level of the lower channel level becomes the specified value (G2). (Adjust before recording, then confirm it by playing back.)
(9) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

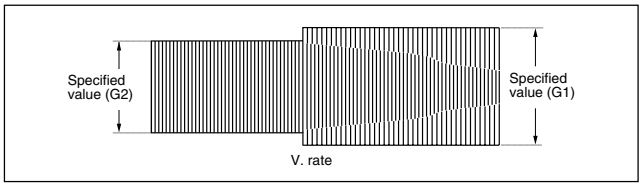


Fig. 3-4-1a Audio REC FM

3.5 DEMODULATOR CIRCUIT

Notes:

- ***Unless otherwise specified in this demod circuit adjustments, all measuring points and adjustment parts are located on the Demod board.***
- ***Unless otherwise specified,set an audio multiplex TV signal generator as follows;***
  RF signal : 70 dBμ / 75Ω, color bar 87.5% modulation.

3.5.1 Input level

Signal	(A)	• RF signal (Audio: mono 300 Hz)
Mode	(B)	• Tuner • EE
Equipment	(C)	• Audio level meter
Measuring point	(D)	• IC1501 pin 26
EVR mode	(F1)	• Jig RCU : Code "57"
EVR address	(F2)	• A : 20 (Press remote controller "2" and "0" keys.)
Specified value	(G)	• 500 ± 10 mVrms
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Set an audio signal mode of the RF signal generator to mono 300 Hz.
(2) Connect the equipment (C) to the measuring point (D).
(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the level of the measuring point (D) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

3.5.2 Stereo VCO

Signal	(A)	• No signal
Mode	(B)	• Tuner • EE
Equipment	(C)	• Frequency counter
Measuring point	(D1)	• IC1501 pin 26
Short point	(D2)	• C1505(–) terminal
EVR mode	(F1)	• Jig RCU : Code "57"
EVR address	(F2)	• A : 21 (Press remote controller "2" and "1" keys.)
Specified value	(G)	• 15.73 ± 0.1 kHz
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Connect the short wire between the short point (D2) and the GND (Ground).
(2) Connect the equipment (C) to the measuring point (D1).

(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the frequency of the measuring point (D1) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(7) Disconnect the short wire between the short point (D2) and the GND (Ground).

3.5.3 Stereo filter

Signal	(A)	• RF signal (Audio: No signal)
Mode	(B)	• Tuner • EE
Equipment	(C)	• Oscilloscope
Measuring point	(D)	• IC1501 pin 26
EVR mode	(F1)	• Jig RCU : Code “57”
EVR address	(F2)	• A : 22 (Press remote controller “2” key twice.)
Specified value	(G)	• Minimum level
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Set an audio signal mode of the RF signal generator to no signal.
(2) Connect the equipment (C) to the measuring point (D).
(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the level of the measuring point (D) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

3.5.4 Separation - 1

Signal	(A)	• RF signal (Audio: L-ch 300 Hz 14% modulated)
Mode	(B)	• Tuner • EE
Equipment	(C)	• Audio level meter
Measuring point	(D)	• IC1501 pin 26
EVR mode	(F1)	• Jig RCU : Code “57”
EVR address	(F2)	• A : 23 (Press remote controller “2” and “3” keys.)
Specified value	(G)	• Minimum level
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Set an audio signal mode of the RF signal generator to alternate L-ch 300 Hz 14% modulated.
(2) Connect the equipment (C) to the measuring point (D).
(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the level of the measuring point (D) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

3.5.5 Separation - 2

Signal	(A)	• RF signal (Audio: L-ch 5 kHz 14% modulated)
Mode	(B)	• Tuner
		• EE
Equipment	(C)	• Audio level meter
Measuring point	(D)	• IC1501 pin 26
EVR mode	(F1)	• Jig RCU : Code “57”
EVR address	(F2)	• A : 24 (Press remote controller “2” and “4” keys.)
Specified value	(G)	• Minimum level
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Set an audio signal mode of the RF signal generator to alternate L-ch 5 kHz 14% modulated.
(2) Connect the equipment (C) to the measuring point (D).
(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the level of the measuring point(D) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)

3.5.6 SAP VCO

Signal	(A)	• No. signal
Mode	(B)	• Tuner • EE
Equipment	(C)	• Frequency counter
Measuring point	(D1)	• IC1501 pin 26
Short point	(D2)	• C1505 (–) terminal
EVR mode	(F1)	• Jig RCU : Code “57”
EVR address	(F2)	• A : 25 (Press remote controller “2” and “5” keys.)
Specified value	(G)	• 78.67 ± 0.5 kHz
Adjustment tool	(H)	• Jig RCU [PTU94023B] • Digit-key remote controller

(1) Connect the short wire between the short point (D2) and the GND (Ground).
(2) Connect the equipment (C) to the measuring point (D1).
(3) Set the VCR to the EVR mode by transmitting the code (F1) from the Jig RCU.
(4) Set the EVR address to (F2) by pressing the button of the digit-key remote controller.
(5) Adjust with the channel buttons (+,–) on the VCR (or on the remote controller) so that the frequency of the measuring point (D1) becomes the specified value (G).
(6) Release the EVR mode of the VCR by transmitting the code (F1) from the Jig RCU again. (When the EVR mode is released, the adjusted data is memorized.)
(7) Disconnect the short wire between the short point (D2) and the GND (Ground).

ELECTRICAL ADJUSTMENT (DV)

3.6 PREPARATION

3.6.1 Precautions

(1) The DV section of this model is based on a special adjustment method using a PC. However, ordinary adjustment is required only when the part listed below has been replaced. In this case, the adjustment should be performed by a service center equipped with the required facilities.

• E^2 PROM (IC1007 on DV main board)

In case of trouble with the electrical circuitry, First identify the faulty position with a measuring tool as described below. Proceed to repair, replacement and/or adjustment only after the troubleshooting.

(2) When observing a chip TP, use an IC clip or similar tool to protect the chip against stress. When replacing a chip part (IC, particularly), remove solder completely before replacing. (This is to prevent separation of the pattern.)

(3) The connectors are fragile. Be careful when plugging or unplugging a wire.

3.6.2 Equipment required for adjustment

① Personal computer (Windows compatible)
② Color monitor
③ Oscilloscope (2-CH, 100 MHz or more)
④ Frequency counter

3.6.3 Tools required for adjustments

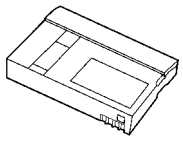
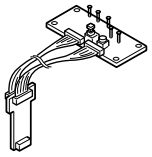
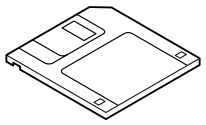
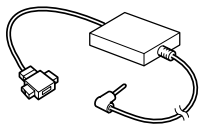
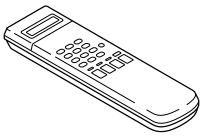
Alignment tape US : MC-1 PAL : MC-2	Jig connector cable PTU94018B	SSS software PTU94016-3
		
PC cable US : QAM0099-002 PAL : QAM0099-005	Jig RCU PTU94023B	
		

Fig. 3-6-3a

3.6.4 Setup

1. Setup for computer adjustment

— Setup by extending the jig connector —

When performing the adjustment by the Service Support Software, set the VCR to external communication mode by transmitting the code "6C" from the Jig RCU.

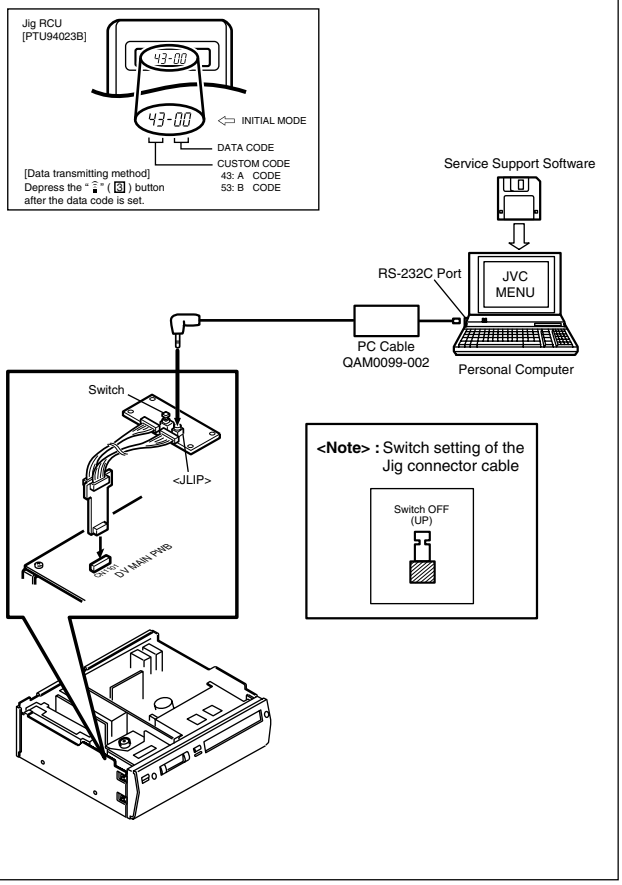


Fig. 3-6-4a Setup for Computer Adjustment

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

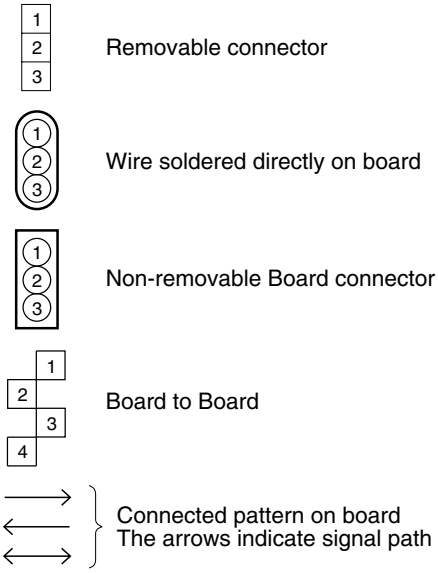
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K or k: kΩ (1000Ω), M: MΩ (1000kΩ)
2) All capacitance values are in μF, (P: PF).
3) All inductance values are in μH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

AUX : Active at high

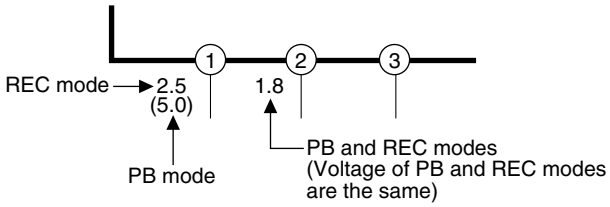
$\overline{\text{AUX}}$ or AUX(L) : Active at low

3. Interpreting Connector indications



4. Voltage measurement

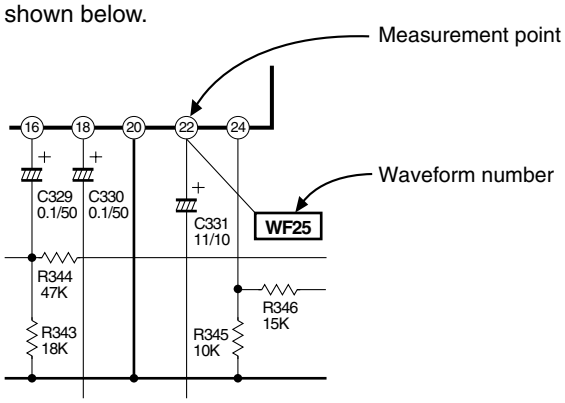
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



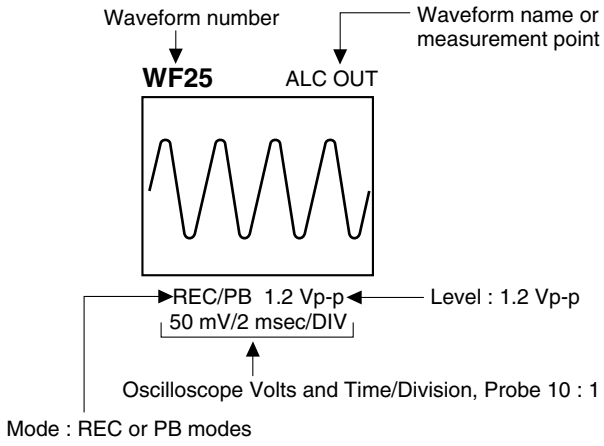
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



5) Waveform indications



6. Signal path Symbols

The arrows indicate the signal path as follows.

Playback signal path

Playback and recording signal path

Recording signal path
(including E-E signal path)

Capstan servo path

Drum servo path

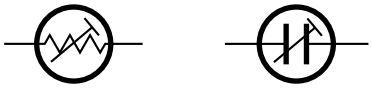
(Example)

R-Y Playback R-Y signal path

Y Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

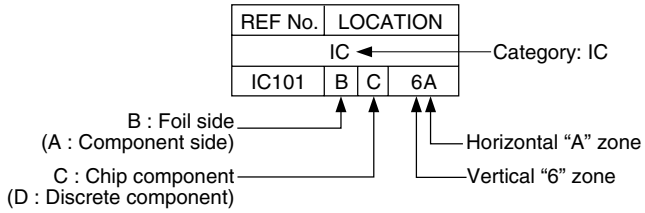
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

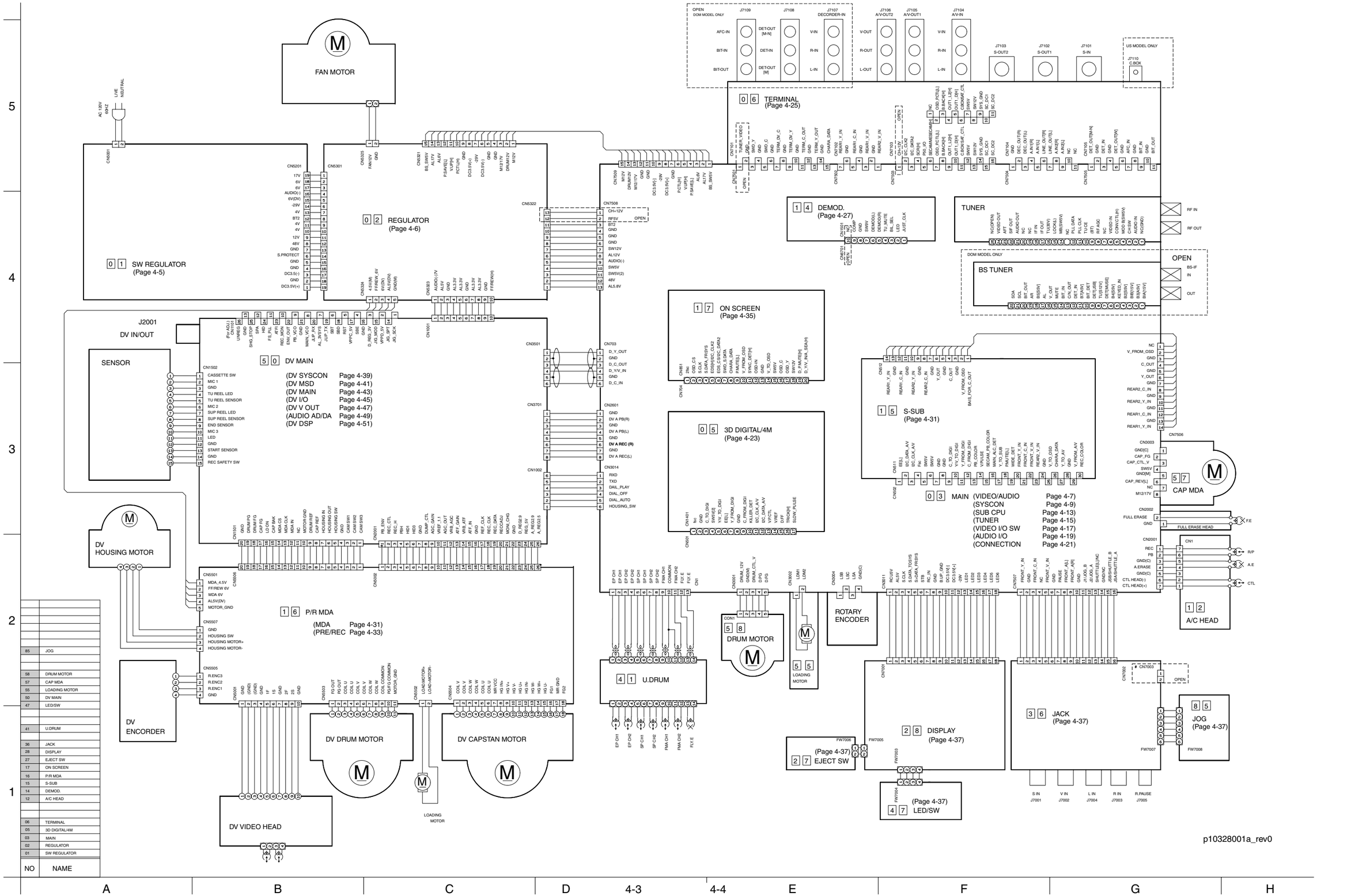
Parts location are indicated by guide scale on the circuit board.



Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

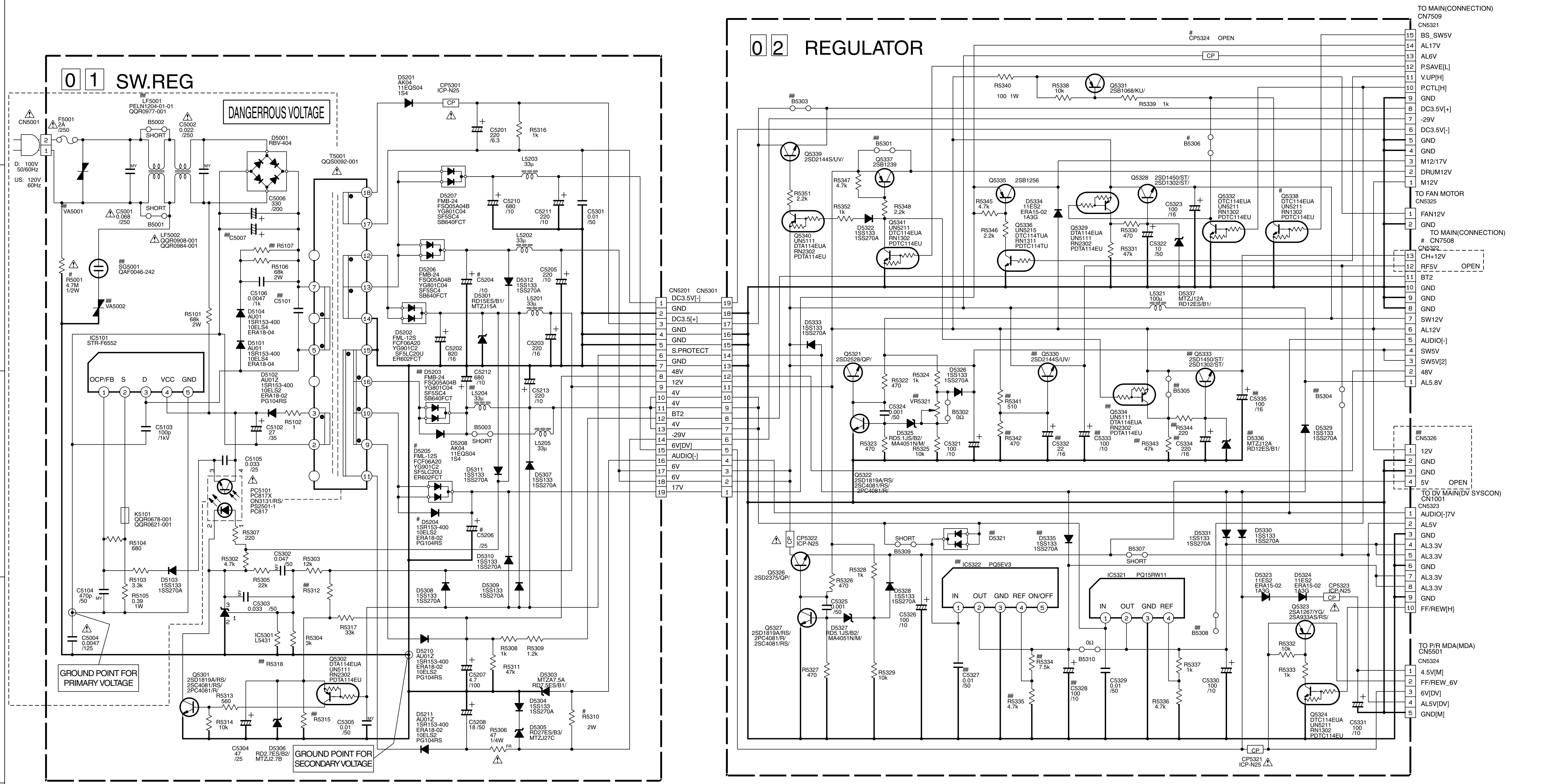
4.1 BOARD INTERCONNECTIONS



NO	NAME
85	JOG
58	DRUM MOTOR
57	CAP MDA
55	LOADING MOTOR
50	DV MAIN
47	LED/SW
41	U.DRUM
36	JACK
28	DISPLAY
27	EJECT SW
17	ON SCREEN
16	P/R MDA
15	S-SUB
14	DEMOD.
12	A/C HEAD
06	TERMINAL
05	3D DIGITAL/4M
03	MAIN
02	REGULATOR
01	SW REGULATOR

4.2 SWITCHING REGULATOR AND REGULATOR SCHEMATIC DIAGRAMS

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



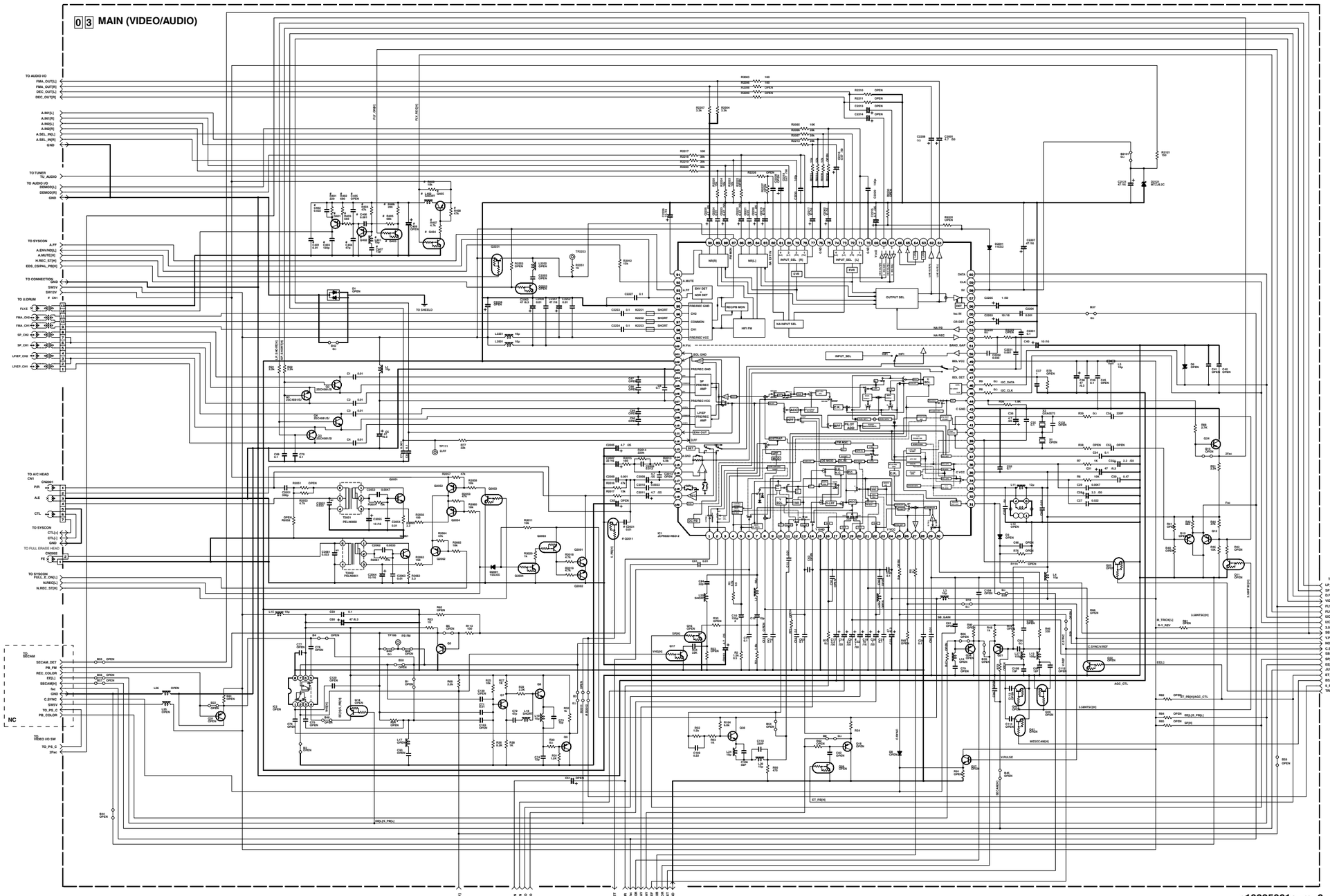
01 SW.REG
DANGERROUS VOLTAGE
CN5001
F5001 2A /250
D: 100V 50/60Hz
US: 120V 60Hz
LF5001 PELN1204-01-01 QQR0977-001
B5002 SHORT
C5002 0.022 /250
C5001 0.068 /250
B5001 SHORT
VA5001
LF5002 QQR0908-001 QQR0984-001
R5001 4.7M 1/2W
SG5001 QAF0046-242
VA5002
D5001 RBV-404
C5006 330 /200
C5007
T5001 QQS0092-001
R5107
R5106 68k 2W
C5106 0.0047 /1k
C5101
D5104 AU01 1SR153-400 10ELS4 ERA18-04
D5101 AU01 1SR153-400 10ELS4 ERA18-04
R5101 68k 2W
IC5101 STR-F6552
OCP/FB S D VCC GND
D5102 AU01Z 1SR153-400 10ELS2 ERA18-02 PG104RS
C5103 100p /1kV
C5102 27 /35
R5102 1
C5105 0.033 /25
PC5101 PC817X ON3131/RS/ PS2501-1 PC817
K5101 QQR0678-001 QQR0621-001
R5104 680
R5103 3.3k
R5105 0.39 1W
D5103 1SS133 1SS270A
C5104 470p /50
C5004 0.0047 /125
GROUND POINT FOR PRIMARY VOLTAGE
R5307 220
R5302 4.7k
C5302 0.047 /50
R5303 12k
R5305 22k
R5312
C5303 0.033 /50
IC5301 L5431
R5304 3k
R5317 33k
R5318
Q5301 2SD1819A/RS/ 2SC4081/RS/ 2PC4081/R/
R5313 560
R5314 10k
Q5302 DTA114EUA UN5111 RN2302 PDTA114EU
R5315
C5305 0.01 /50
C5304 47 /25
D5306 RD2.7ES/B2/ MTZJ2.7B
GROUND POINT FOR SECONDARY VOLTAGE
D5201 AK04 11EQS04 1S4
CP5301 ICP-N25
C5201 220 /6.3
R5316 1k
L5203 33µ
D5207 FMB-24 FSQ05A04B YG801C04 SF5SC4 SB640FCT
C5210 680 /10
C5211 220 /10
C5301 0.01 /50
L5202 33µ
D5206 FMB-24 FSQ05A04B YG801C04 SF5SC4 SB640FCT
C5204 /10
D5301 RD15ES/B1/ MTZJ15A
D5312 1SS133 1SS270A
C5205 220 /10
L5201 33µ
D5202 FML-12S FCF06A20 YG901C2 SF5LC20U ER602FCT
C5202 820 /16
C5203 220 /16
D5203 FMB-24 FSQ05A04B YG801C04 SF5SC4 SB640FCT
C5212 680 /10
L5204 33µ
C5213 220 /10
B5003 SHORT
L5205 33µ
D5208 AK04 11EQS04 1S4
D5205 FML-12S FCF06A20 YG901C2 SF5LC20U ER602FCT
D5311 1SS133 1SS270A
D5307 1SS133 1SS270A
D5204 1SR153-400 10ELS2 ERA18-02 PG104RS
C5206 /25
D5310 1SS133 1SS270A
D5308 1SS133 1SS270A
D5309 1SS133 1SS270A
D5210 AU01Z 1SR153-400 ERA18-02 10ELS2 PG104RS
R5308 1k
R5309 1.2k
C5207 4.7 /100
R5311 47k
D5303 MTZA7.5A RD7.5ES/B1/
D5304 1SS133 1SS270A
R5310 2W
D5211 AU01Z 1SR153-400 ERA18-02 10ELS2 PG104RS
C5208 18 /50
R5306 47 1/4W
D5305 RD27ES/B3/ MTZJ27C
CN5201 CN5301
DC3.5V[-]
GND
DC3.5[+]
GND
GND
S.PROTECT
GND
48V
12V
4V
4V
BT2
4V
-29V
6V[DV]
AUDIO[-]
6V
6V
17V
02 REGULATOR
CP5324 OPEN
R5340 100 1W
R5338 10k
Q5331 2SB1068/KU/
R5339 1k
B5303
Q5339 2SD2144S/UV/
B5301
Q5337 2SB1239
R5347 4.7k
R5351 2.2k
R5352 1k
R5348 2.2k
D5322 1SS133 1SS270A
Q5340 UN5111 DTA114EUA RN2302 PDTA114EU
Q5341 UN5211 DTC114EUA RN1302 PDTC114EU
Q5335 2SB1256
R5345 4.7k
R5346 2.2k
D5334 11ES2 ERA15-02 1A3G
Q5336 UN5215 DTC114TUA RN1311 PDTC114TU
Q5329 DTA114EUA UN5111 RN2302 PDTA114EU
Q5328 2SD1450/ST/ 2SD1302/ST/
R5330 470
R5331 47k
C5322 10 /50
C5323 100 /16
B5306
Q5332 DTC114EUA UN5211 RN1302 PDTC114EU
Q5338 DTC114EUA UN5211 RN1302 PDTC114EU
L5321 100µ
D5337 MTZJ12A RD12ES/B1/
D5333 1SS133 1SS270A
Q5321 2SD2528/QP/
R5322 470
R5324 1k
D5326 1SS133 1SS270A
VR5321
B5302 0Ω
C5324 0.001 /50
D5325 RD5.1JS/B2/ MA4051N/M/
R5323 470
R5325 10k
C5321 100 /10
R5341 510
R5342 470
Q5330 2SD2144S/UV/
C5332 22 /16
C5333 100 /10
Q5334 UN5111 DTA114EUA RN2302 PDTA114EU
R5343 47k
R5344 220
C5334 220 /16
B5305
Q5333 2SD1450/ST/ 2SD1302/ST/
C5335 100 /16
D5336 MTZJ12A RD12ES/B1/
B5304
D5329 1SS133 1SS270A
Q5322 2SD1819A/RS/ 2SC4081/RS/ 2PC4081/R/
CP5322 ICP-N25
SHORT B5309
D5321
D5335 1SS133 1SS270A
Q5326 2SD2375/QP/
R5328 1k
R5326 470
C5325 0.001 /50
D5328 1SS133 1SS270A
Q5327 2SD1819A/RS/ 2PC4081/R/ 2SC4081/RS/
D5327 RD5.1JS/B2/ MA4051N/M/
C5326 100 /10
IC5322 PQ5EV3
IN OUT GND REF ON/OFF
R5327 470
R5329 10k
C5327 0.01 /50
R5334 7.5k
R5335 4.7k
C5328 100 /10
B5310 0Ω
IC5321 PQ15RW11
IN OUT GND REF
C5329 0.01 /50
B5307 SHORT
R5336 4.7k
R5337 1k
C5330 100 /10
B5308
D5331 1SS133 1SS270A
D5330 1SS133 1SS270A
D5323 11ES2 ERA15-02 1A3G
D5324 11ES2 ERA15-02 1A3G
CP5323 ICP-N25
Q5323 2SA1267/YG/ 2SA933AS/RS/
R5332 10k
R5333 1k
Q5324 DTC114EUA UN5211 RN1302 PDTC114EU
C5331 100 /10
CP5321 ICP-N25
TO MAIN(CONNECTION) CN7509
CN5321
15 BS_SW5V
14 AL17V
13 AL6V
12 P.SAVE[L]
11 V.UP[H]
10 P.CTL[H]
9 GND
8 DC3.5V[+]
7 -29V
6 DC3.5V[-]
5 GND
4 GND
3 M12/17V
2 DRUM12V
1 M12V
TO FAN MOTOR CN5325
1 FAN12V
2 GND
TO MAIN(CONNECTION) # CN7508
CN5322
13 CH+12V
12 RF5V OPEN
11 BT2
10 GND
9 GND
8 GND
7 SW12V
6 AL12V
5 AUDIO[-]
4 SW5V
3 SW5V[2]
2 48V
1 AL5.8V
CN5326
1 12V
2 GND
3 GND
4 5V OPEN
TO DV MAIN(DV SYSCON) CN1001
CN5323
1 AUDIO[-]7V
2 AL5V
3 GND
4 AL3.3V
5 AL3.3V
6 GND
7 AL3.3V
8 AL3.3V
9 GND
10 FF/REW[H]
TO P/R MDA(MDA) CN5501
CN5324
1 4.5V[M]
2 FF/REW_6V
3 6V[DV]
4 AL5V[DV]
5 GND[M]
MARK ELEMENTS ARE NOT MOUNTED
p20190001a_rev1

DIFFERENCE TABLE

	D5204	D5205	R5001	R5310	C5204	C5206	Q5338	CP5324	B5306
DOM	NO	YES	NO	680	2700	330	YES	YES	NO
US	YES	NO	YES	820	2200	180	NO	NO	YES

4.3 VIDEO / AUDIO SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



 # DIFFERENCE TABLE ○ Used × Not used

SYMBOL / MODEL	Q401-Q405 L401,L402 R401-R409 C401-C407,C409	CN1
W/ FE HEAD	○	1- 13
W/O FE HEAD	×	1- 11

SYMBOL / MODEL	Q2011 C2021 B2012
W/ XS_PB	○
W/O XS_PB	×

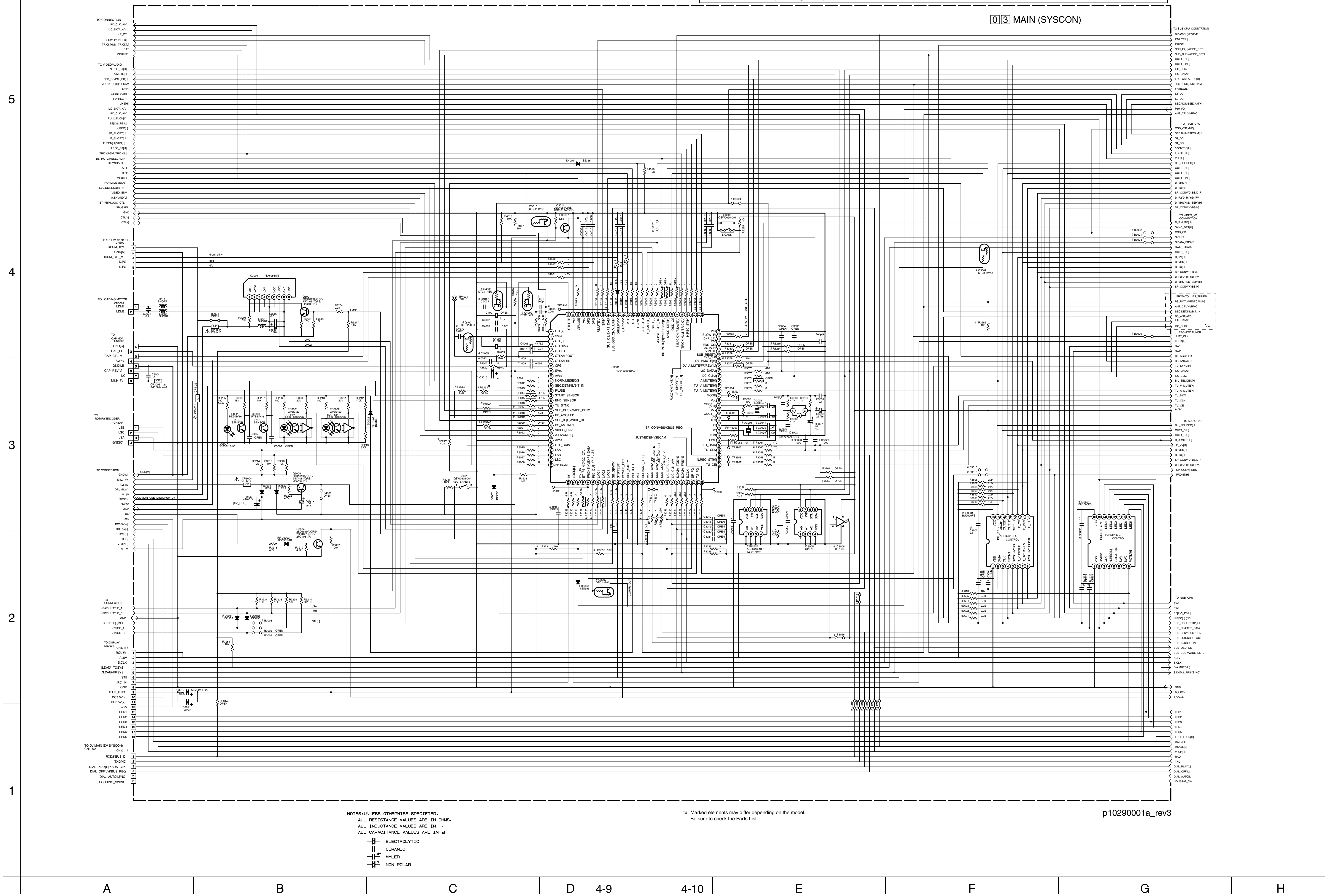
SYMBOL / MODEL	CS2
W/ BS	○
W/O BS	×

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ALL NPN TYPE TRANSISTORS ARE 2SC4081/QRS/.
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.
ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC144WUA.
ALL PNP TYPE DIGITAL TRANSISTORS ARE DTA144WUA

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.4 SYSTEM CONTROL SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



03 MAIN (SYSCON)
TO CONNECTION
TO VIDEO/AUDIO
TO DRUM MOTOR CN3001
TO LOADING MOTOR CN3002
TO CAP MDA CN3003
TO ROTARY ENCODER CN3004
TO DISPLAY CN7001
TO DV MAIN (DV SYSCON) CN1002
IC3001 HD6432194BA21F
IC3004 BA6956AN
IC3002 S-80727AN-DQ-X
IC3003 AT24C16-10PC 24LC16B/P
IC3005 OPEN
IC3006 TC7S04F
IC3601 BU2090FS AUDIO/VIDEO CONTROL
IC3651 BU2090FS TUNER/REG CONTROL
TO SUB CPU, CONNTRTION
TO SUB_CPU
TO VIDEO_I/O, CONNECTION
FROM/TO BS_TUNER
NC
FROM/TO TUNER
TO AUDIO_I/O
TO_SUB_CPU

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

\#\# Marked elements may differ depending on the model.
Be sure to check the Parts List.

p10290001a_rev3

#DIFFERENCE TABLE

○ : Used
X : Not used

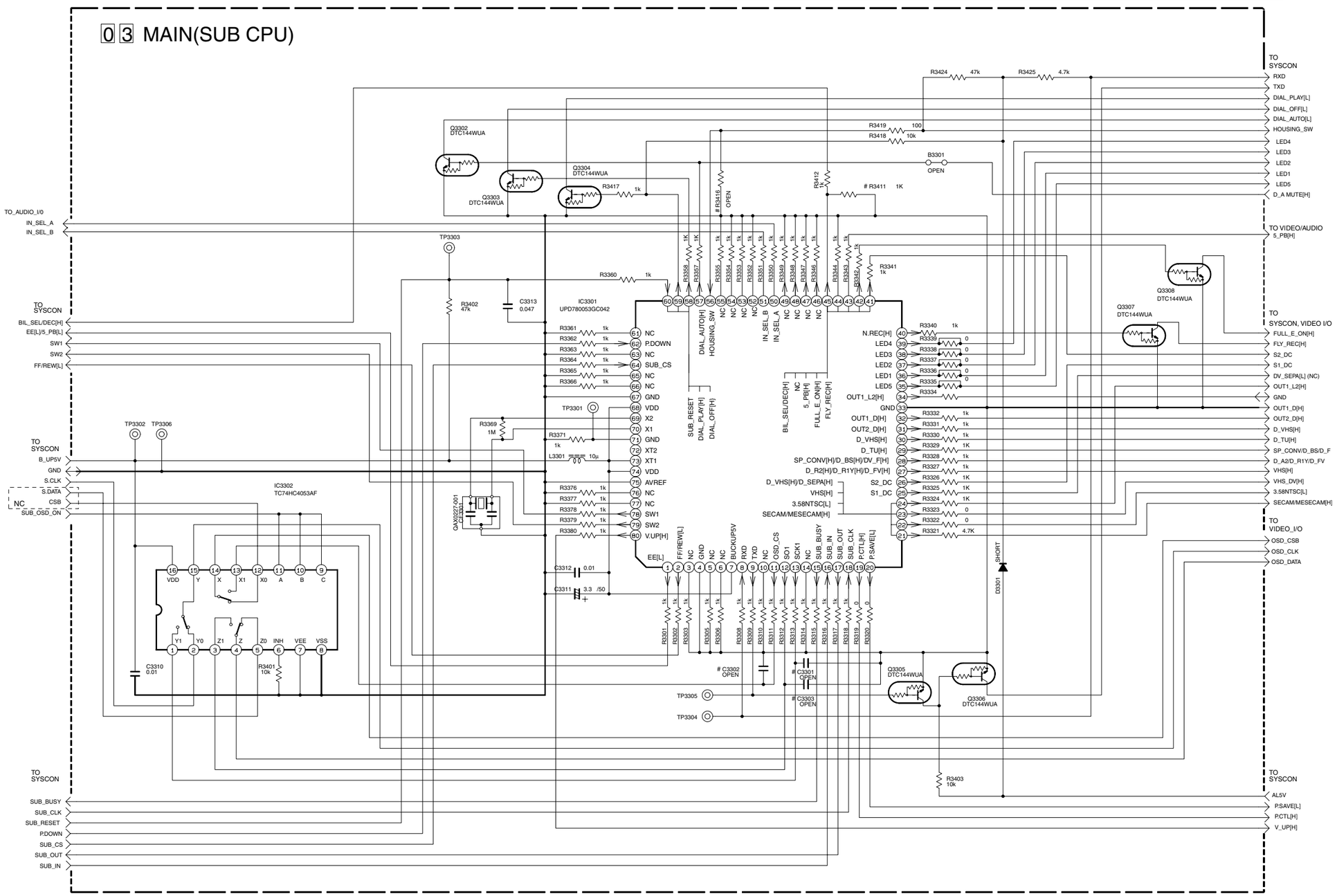
ITEM		HR-DVS2 /SR-VS20 EU/EK	MS	US	DOM	HM-HDS1 DOM	PAL	MS	US
JOG/S	B3003 D3011 D3012	○	○	○	○	X	X	X	X
CTL_GAIN	C4010 Q4001	○	○	○	○	○	○	○	○
SEC.DET/KIL/BIT_IN	R3252	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
SUB_BUSY/W.DET2	R3245	X	X	X	X	X	X	X	X
	R3017	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k
RF_AGC/LED	R3018	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k	4.7k
	R3247	X	X	4.7k	X	X	X	X	4.7k
SCR_ID/WIDE	R3019	6.8k	6.8k	X	4.7k	4.7k	6.8k	6.8k	X
	R3258	4.7k	4.7k	X	X	X	4.7k	4.7k	X
P50_IN	R3234	10k	10k	X	X	X	10k	10k	X
	Q3007 D3008	○	○	X	X	X	○	○	X
RMO/ANT_CTL	R3257	X	X	X	X	X	X	X	X
	R3044	0Ω	0Ω	X	1k	1k	0Ω	0Ω	X
JUST/EDS/SECAM	R3056	1k	1k	1k	1k	1k	1k	1k	1k
EEPROM	IC3003	16k	16k	8k	8k	8k	8k	8k	8k
TU_CE/CLK/DATA	R3057 R3060 R3061	○	○	○	○	○	○	○	X
SP_CONV/BS/KBUS_REQ	R3059	1k	1k	1k	1k	470	470	470	470
TU_CLK	C3028	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
TU_DATA	C3029	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
CRYSTAL	X3001	QAX0445	QAX0444	QAX0444	QAX0444	QAX0444	QAX0445	QAX0444	QAX0444
	C3025	○	X	X	X	X	○	X	X
	C3041	X	10p	10p	10p	10p	X	10p	10p
	C3024	22p	12p	12p	12p	12p	22p	12p	12p
EXPANDA	IC3601 IC3651 C3602 C3603 C3604 C3652 C3653 C3654	X	X	X	X	○	○	○	○
FRONT[H]/EXP1_DATA	B3015	○	○	○	○	X	X	X	X
SP_CONV/BS/KBUS_REQ	B3016	○	○	○	○	X	X	X	X
JUST_CLK	B3020	X	X	X	○	○	X	X	X
BS_P.CTL	R3256	X	X	X	X	X	X	X	X
SUB_D.IN/KBUS	B3011	X	X	X	X	○	○	○	○
D.IN/RXD	B3019	X	X	X	X	1k	1k	1k	1k
SUB_D.OUT/KBUS D.OUT/TXD	B3012	X	X	X	X	X	X	X	X
SUB_CLK/KBUS CLK/DIAL_PLAY	B3013	X	X	X	X	○	○	○	○
SP_CONV/BS/KBUS_REQ /DIAL_OFF	B3014	X	X	X	X	○	○	○	○
CN3014	CN3014	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin	1-6pin
KBUS_DATA	IC3006	X	X	X	X	○	○	○	○
	B3026	○	○	○	○	X	X	X	X
SUB_OSD_ON/V.UP	B3017	X	X	X	X	○	○	○	○
D_P.MUTE	R3078	1k (10kΩ)	1k	1k	1k	1k	1k	1k	1k
	R3255	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
D_A.MUTE/FF/REW	R3254	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN	OPEN
	B3024	X	X	X	X	○	○	○	○
EDS	Q3009	X	X	○	X	X	X	X	○
OSD	B3021 B3022 B3023	X	X	X	X	○	○	○	○
JBS/STLB/S1_DC	B3025	X	X	X	X	○	X	X	X
CN3011	CN3011	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin	1-18pin
SUB_RESET/EXP.CLK	R3079	1k	1k	1k	1k	1k	1k	1k	1k
FF/REW	C4015	680p (330p)	680p	0.001	680p	680p	680p	680p	0.001
	Q4002 C4016	○	○	X	○	○	○	○	X
	Q4003 C4017	○	○	○	○	○	○	○	○
	C4005	X	X	X	X	X	X	X	X
SUB_CLK/KBUS_CLK	R3048	220	220	220	220	220	220	220	220
B.BACK/P.SAVE	B3018	X	X	X	X	○	○	○	○
IN_SELA/EXP1_DATA	R3033	0Ω	0Ω	0Ω	0Ω	1k	1k	1k	1k
SUB_CS/EXP2_DATA	R3104	4.7k	4.7k	4.7k	4.7k	1k	1k	1k	1k
M_PULSE	Q3010 Q3011 R3107	X	X	○	○	○	X	X	○
P50_OUT/M_PULSE	R3034	0Ω	0Ω	4.7k	4.7k	4.7k	0Ω	0Ω	4.7k
V.FF	R4011	4.7k (2.2k)	4.7k	1k	1k	2.7k	2.7k	2.7k	2.7k
	R4014	0Ω (2.2k)	0Ω	1.8k	1.8k	0Ω	0Ω	0Ω	0Ω

p10290001a_rev3

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

4.5 SUB CPU SCHEMTIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



MARK ELEMENTS ARE NOT MOUNTED.

NOTES:UNLESS OTHERWISE SPECIFIED.

ALL RESISTANCE VALUES ARE IN OHMS.

ALL INDUCTANCE VALUES ARE IN H.

ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC

CERAMIC

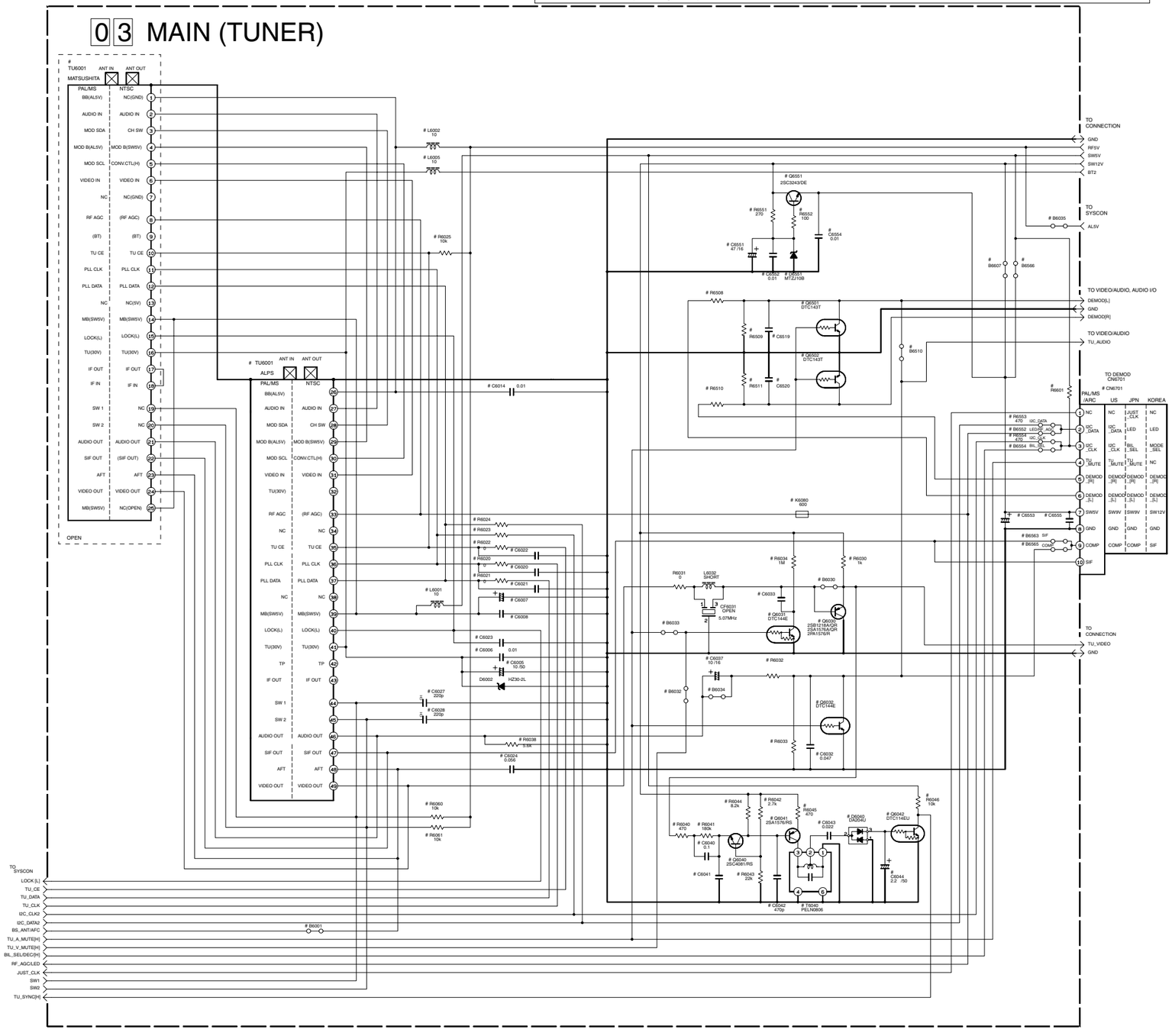
MYLER

NON POLAR

p20174001a_rev1

4.6 TUNER SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MY MYLER
N NON POLAR

DIFFERENCE TABLE

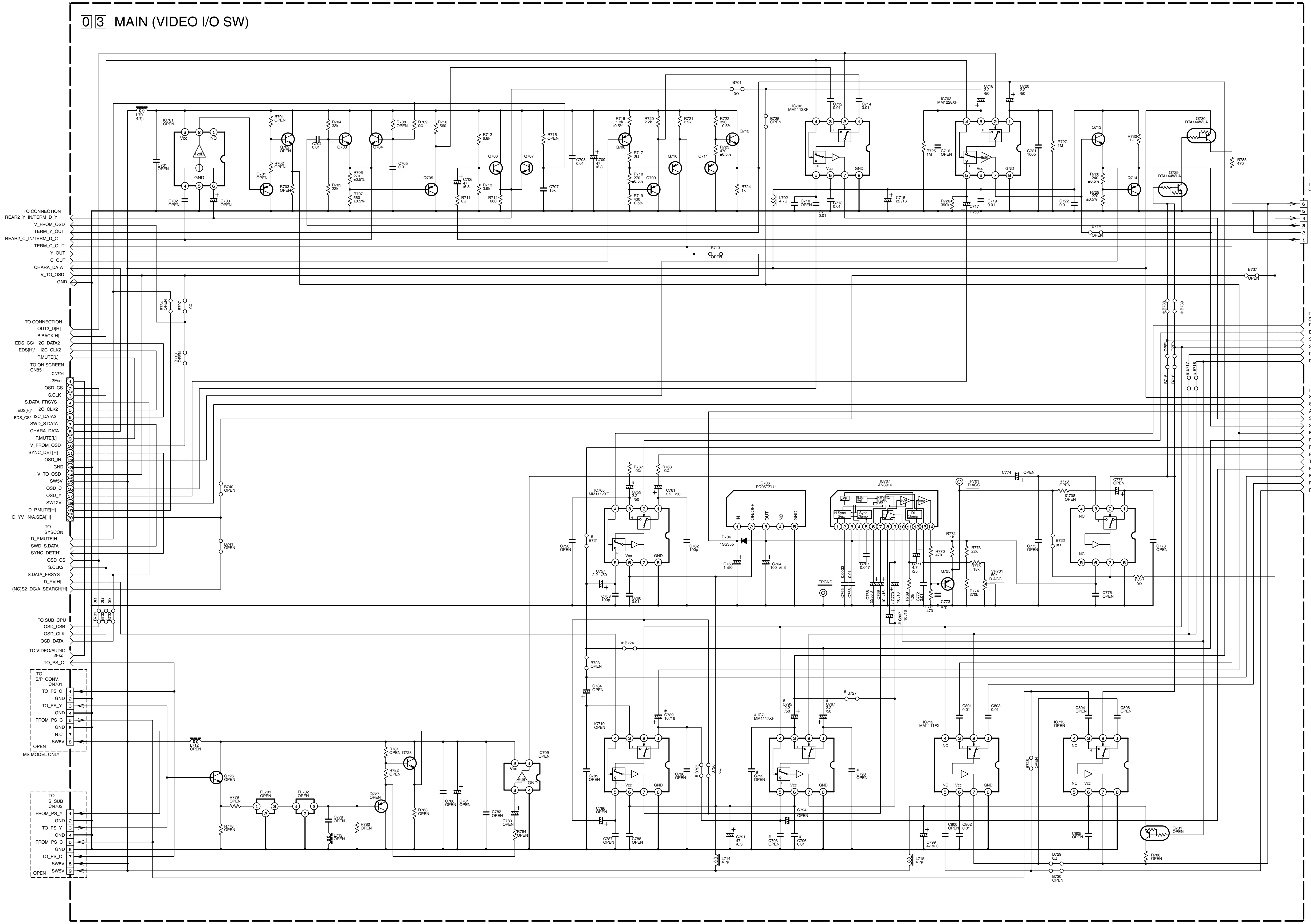
○ Used
× Not Used

TUNER	SYMBOL	EU/EK	FRANCE MS	JAPAN		US	
				DVS2	HDS1	DVS2/VS20	HDS1
TUNER	TU6001	ALPS QAU0151	ALPS QAU0152	MATSUSHITA QAU0198	MATSUSHITA QAU0198	ALPS QAU0163	ALPS QAU0163
	R6025,B6035	×	×	×	×	×	×
ATS+	K6080	○	○	×	×	×	×
VIDEO BUFFER	R6030,Q6030	○	○	○	○	×	×
	B6030	×	×	×	×	○	○
TU_V_MUTE	Q6031	○	○	○	×	×	×
	R6034	×	×	○	×	×	×
	C6033	0	0	0.0047	×	×	×
	B6032	○	○	×	×	×	×
TU_A_MUTE	Q6032	○	○	×	×	×	×
	B6033	×	×	○	×	×	×
AUDIO OUT	R6032	3.9k	3.3k	0	0	12k	12k
	R6033	1.8k	1.8k	×	×	×	×
	R6038	×	×	×	×	×	×
	C6032	0.047	×	×	×	×	×
	B6034	×	×	○	○	○	○
	C6037	○	○	×	×	×	×
AFC	B6001	○	○	×	×	○	×
	C6024	×	×	×	×	×	×
CENELEC	C6027,C6028	×	○	×	×	×	×
TU(30V)	C6005	×	×	×	×	×	×
	C6006	×	×	×	×	×	×
	L6005	10	10	SHORT	SHORT	SHORT	SHORT
MB(SW5V)	C6007	330/10	330/10	×	×	×	×
	C6008	×	×	×	×	×	×
	L6001	○	○	SHORT	SHORT	SHORT	SHORT
BB(AL5V)	C6014,L6002	○	○	×	×	×	×
PLL CLK	R6020	470	470	1k	1k	1k	1k
	R6023	×	×	×	×	×	×
	C6020	×	×	×	×	×	×
PLL DATA	R6021	470	470	1k	1k	1k	1k
	R6024	×	×	×	×	×	×
	C6021	×	×	×	×	×	×
TU CE	R6022	470	470	1k	1k	1k	1k
	C6022	×	×	×	×	×	×
LOCK	C6023	○	○	×	×	×	×
SYSTEM SW	R6060,R6061	○	○	×	×	×	×
SYNC DET	R6040–R6046, C6040–C6044, Q6040–Q6042, D6040,T6040	×	×	×	×	○	○

DEMOD	SYMBOL	EU/EK	FRANCE MS	JAPAN		US	
				DVS2	HDS1	DVS2/VS20	HDS1
DEMOD PWB ASSY	CN6701	LPA10094*	LPA10094*	PB11087*	PB11087*	PB11076*	PB11076*
9V REG	R6551,R6552, Q6551,D6551	×	×	○	○	○	○
	C6551,C6552	×	×	×	×	×	×
DEMOD REG PASS CON	C6553	33/16	33/16	×	×	×	×
	C6554	×	×	×	×	×	×
	C6555	0.01	0.01	×	×	×	×
SW12V	B6607	×	×	×	×	×	×
DEMOD OUT	R6508,R6510	0	0	0	0	0	0
	R6509,R6511	×	×	×	×	×	×
	C6519,C6520	×	×	×	×	×	×
MUTE	Q6501,Q6502	×	×	×	×	○	○
TUNER MONO	B6510	×	×	×	×	×	×
DEMOD SELECTION	R6553,R6554	0	0	×	×	0	0
	B6552,B6554	×	×	○	○	×	×
	B6563	×	×	×	×	×	×
	B6565	×	×	○	○	○	○
	B6566	○	○	×	×	×	×
	R6601	×	×	×	×	×	×

4.7 VIDEO I/O SWITCH SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



0 3 MAIN (VIDEO I/O SW)
TO CONNECTION
REAR2_Y_IN/TERM_D_Y
V_FROM_OSD
TERM_Y_OUT
REAR2_C_IN/TERM_D_C
TERM_C_OUT
Y_OUT
C_OUT
CHARA_DATA
V_TO_OSD
GND
TO CONNECTION
OUT2_D[H]
B.BACK[H]
EDS_CS/ I2C_DATA2
EDS[H]/ I2C_CLK2
P.MUTE[L]
TO ON SCREEN
CN851
CN704
2Fsc
OSD_CS
S.CLK
S.DATA_FRSYS
EDS[H]/ I2C_CLK2
EDS_CS/ I2C_DATA2
SWD_S.DATA
CHARA_DATA
P.MUTE[L]
V_FROM_OSD
SYNC_DET[H]
OSD_IN
GND
V_TO_OSD
SW5V
OSD_C
OSD_Y
SW12V
D_P.MUTE[H]
D_YV_IN/A.SEA[H]
TO SYSCON
D_P.MUTE[H]
SWD_S.DATA
SYNC_DET[H]
OSD_CS
S.CLK2
S.DATA_FRSYS
D_YV[H]
(NC)S2_DC/A_SEARCH[H]
TO SUB_CPU
OSD_CSB
OSD_CLK
OSD_DATA
TO VIDEO/AUDIO
2Fsc
TO_PS_C
TO S/P_CONV.
CN701
TO_PS_C
GND
TO_PS_Y
GND
FROM_PS_C
GND
N.C
SW5V
OPEN
MS MODEL ONLY
TO S_SUB
CN702
FROM_PS_Y
GND
TO_PS_Y
GND
FROM_PS_C
GND
TO_PS_C
SW5V
SW5V
OPEN
IC701 OPEN
IC702 MM1113XF
IC703 MM1228XF
IC705 MM1117XF
IC706 PQ05TZ1U
IC707 AN3916
IC708 OPEN
IC709 OPEN
IC710 OPEN
IC711 MM1117XF
IC712 MM1111FX
IC713 OPEN
Q729 DTA144WUA
Q730 DTA144WUA
Q731 OPEN
D706 1SS355
TP701 D AGC
TPGND
VR701 50k D AGC
TO DV MAIN(DV V OUT)
CN3501
CN703
D_C_IN
GND
D_Y/V_IN
D_C_OUT
GND
D_Y_OUT
TO SYSCON
D_R2/D_R1Y/D_FV
D_TU[H]
SP_CONV[H]/BS[H]
SP_CONV/D_BS/D_F
D_VHS[H]
D_VHS[H]/D_SEPA[H]
TO CONNECTION
SW5V
SW12V
AL5.8V
SWD_C
SWD_Y
BS_VIDEO
REAR1_Y_IN
REAR2_V_IN
REAR1_V_IN
TUNER_VIDEO
FRONT_Y_IN
FRONT_V_IN
REAR1_C_IN
FRONT_C_IN

DIFFERENCE TABLE

O : Used
x : Not used

MODEL \ S.NO	IC711 C789, C792, C793, C795~ C798, C807 B717, B721, B725, B739	C770 B718, B724, B727, B738
DOM	O	X
US	X	O

NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

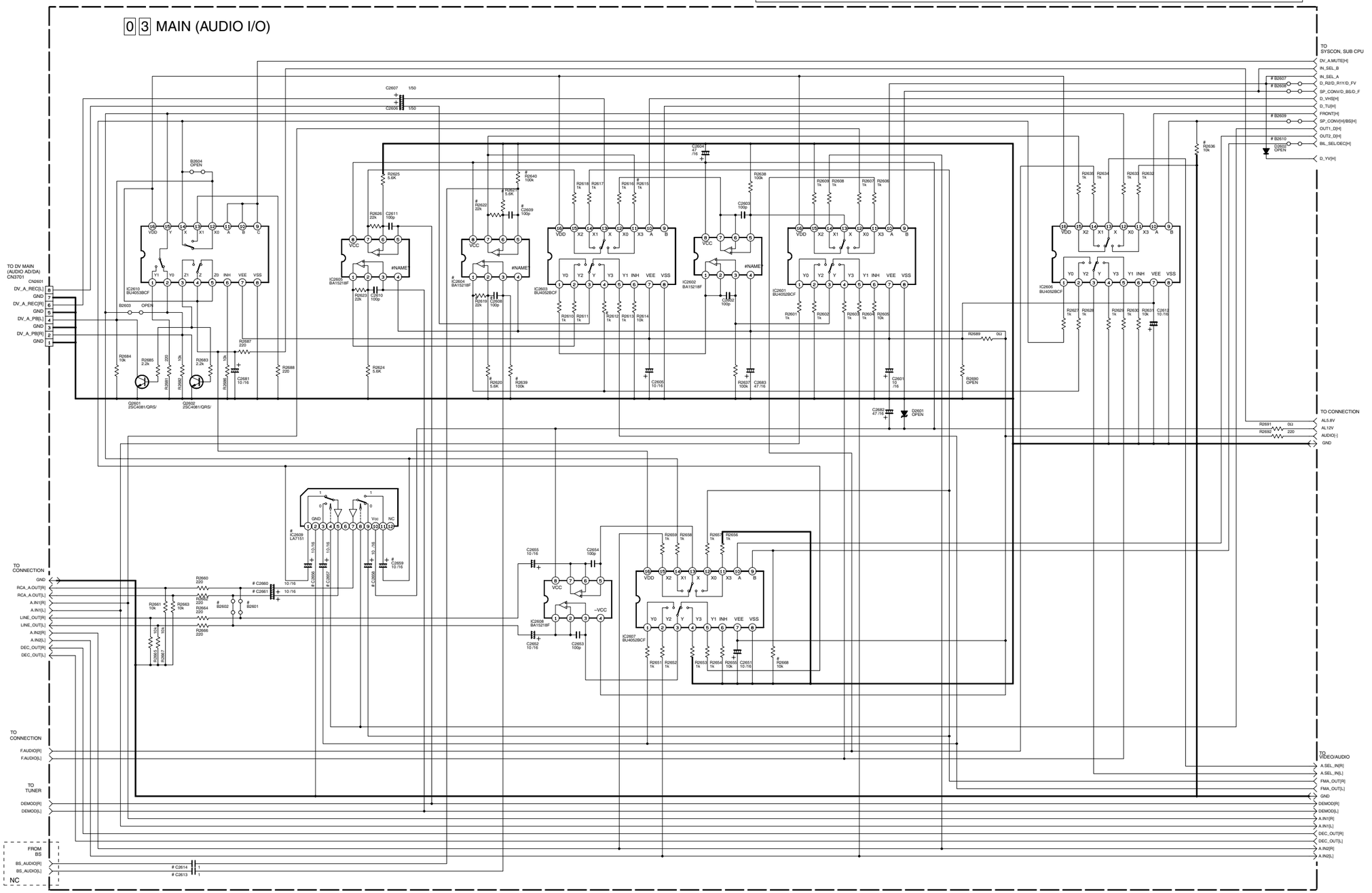
- ELECTROLYTIC
- CERAMIC
- MYLER
- NON POLAR

ALL NPN TYPE TRANSISTORS ARE 2SC4081/QRS/.
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.

p10327001a_rev0

4.8 AUDIO I/O SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



p10336001a_rev0

DIFFERENCE TABLE

○ Used
× Not used

SYMBOL / MODEL	B2601,B2602 B2607,B2608	IC2609 C2656-C2661
With DVC	×	○
With HDD	○	×

SYMBOL / MODEL	B2609 R2668	B2610 R2636
NTSC	○	×
PAL/MS	×	○

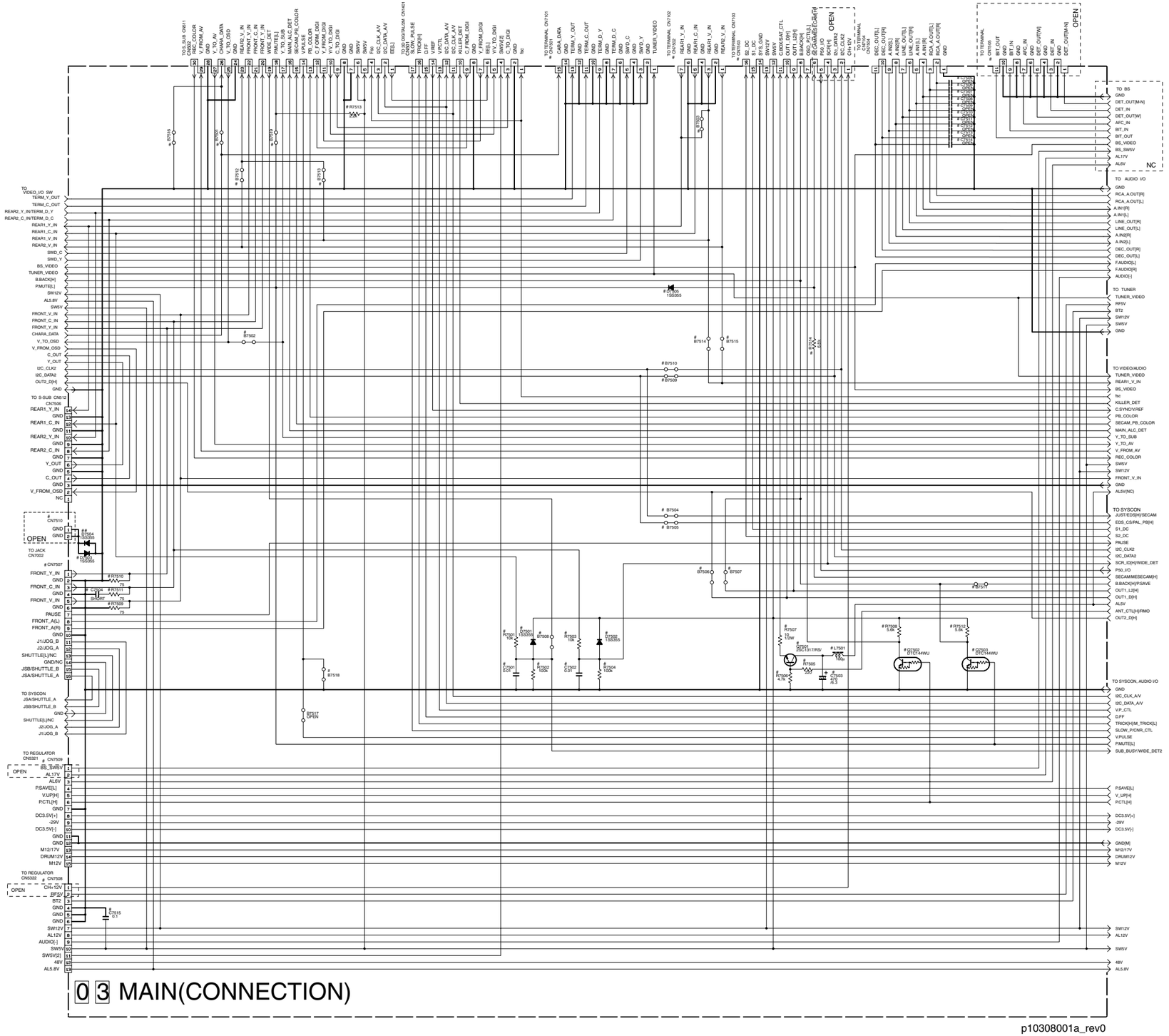
SYMBOL / MODEL	IC2604 _R2612,R2615 R2619-R2622,R2638,R2640 C2608,C2609,C2613,C2614
With BS	○
W/O BS	×

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.9 CONNECTION SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



○ Used
X Not used

DIFFERENCE TABLE

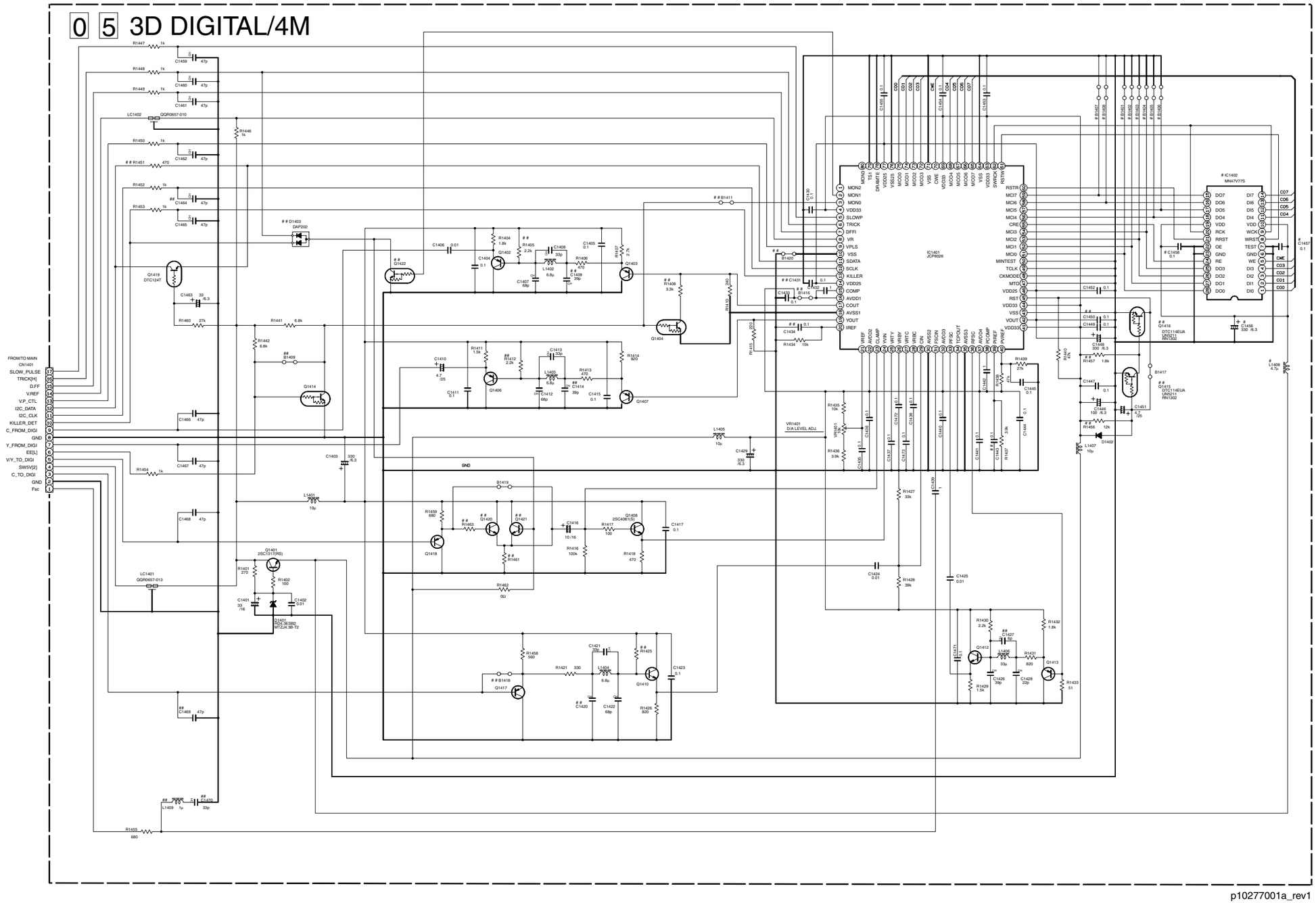
	DVS2/VS20 EU	EK	MS	DOM	US	HM-HDS1 DOM	US
B7501	X	X	X	X	X	○	
B7502	X	X	X	X	X	X	
B7503	○	○	○	X	X	X	
B7504	X	X	X	X	○	X	
B7505	X	X	X	X	○	X	
B7506	X	X	X	X	X	X	
B7507	X	X	X	X	X	X	
B7508	X	X	X	○	X	X	
B7509	○	○	○	X	X	X	
B7510	○	○	○	X	X	X	
B7511	○	○	○	○	○	X	
B7512	○	○	○	X	X	X	
B7513	X	X	X	○	○	○	
B7514	○	○	○	X	X	X	
B7515	X	X	X	○	○	○	
B7516	○	○	○	○	○	X	
B7517	X	X	X	X	X	X	
B7518	○	○	○	○	○	○	
B7519	X	X	X	○	○	○	
R7513	○	○	○	X	X	X	
R7501 R7502 R7503 R7504 C7501 C7502 D7501 D7502	X	X	X	X	X	○	
C7505 -C7514	X	X	X	X	X	X	
C7515	X	X	X	○	○	○	
Q7501 R7505 R7506 R7507 L7501 C7503	○	○	○	X	○	X	
R7508 Q7502	○	○	○	○	○	X	
R7512 Q7503	X	X	X	X	X	○	
R7509 R7510 R7511 C7504	X	X	X	X	X	X	
CN7510 D7503	X	X	X	X	X	X	
CN7501	1-15	1-15	1-15	3-15	3-15	3-6	
CN7502	1-5	1-5	1-5	1-7	1-7	1-7	
CN7503	1-14	1-14	1-14	7-16	7-16	8-15	
CN7505	X	X	X	1-11	X	1-11	
CN7507	1-16	1-16	1-16	1-16	1-16	1-10	
CN7508	1-13	1-13	1-13	3-13	3-13	3-13	
CN7509	3-15	3-15	3-15	1-15	3-15	1-15	
D7505	○	○	○	X	X	X	
R7514	○	○	○	X	X	X	

Marked elements may differ depending on the model.
Be sure to check the Parts List.

NOTES-UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.10 3D DIGITAL / 4M SCHEMATIC DIAGRAM



NOTES: UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

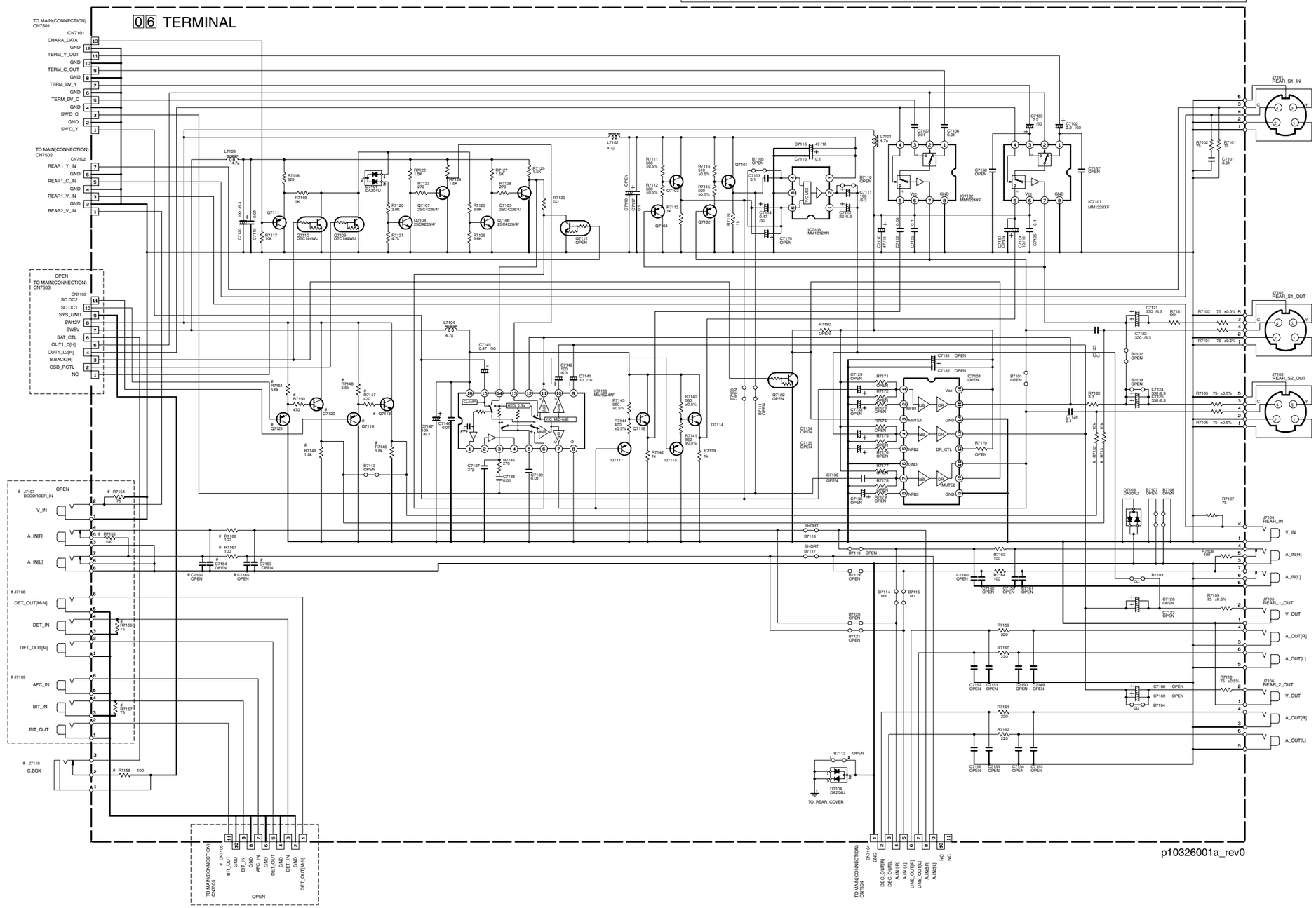
MARK ELEMENTS ARE NOT MOUNTED.
ALL DIODES ARE 1SS133 OR 1N4148
ALL PNP TYPE TRANSISTORS ARE 2SA1576A(QR) OR 2PA1576
ALL NPN TYPE TRANSISTORS ARE 2SC4081(QRS) OR 2PC4081
ALL NPN TYPE DIGITAL TRANSISTORS ARE DTC144WUA OR UN521E OR RN1309

DIFFERENCE TABLE

SYSTEM	IC1402,L1408 C1456,C1457,C1458,	B1401-B1408
4M	○	×
2M	×	○

4.11 TERMINAL SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



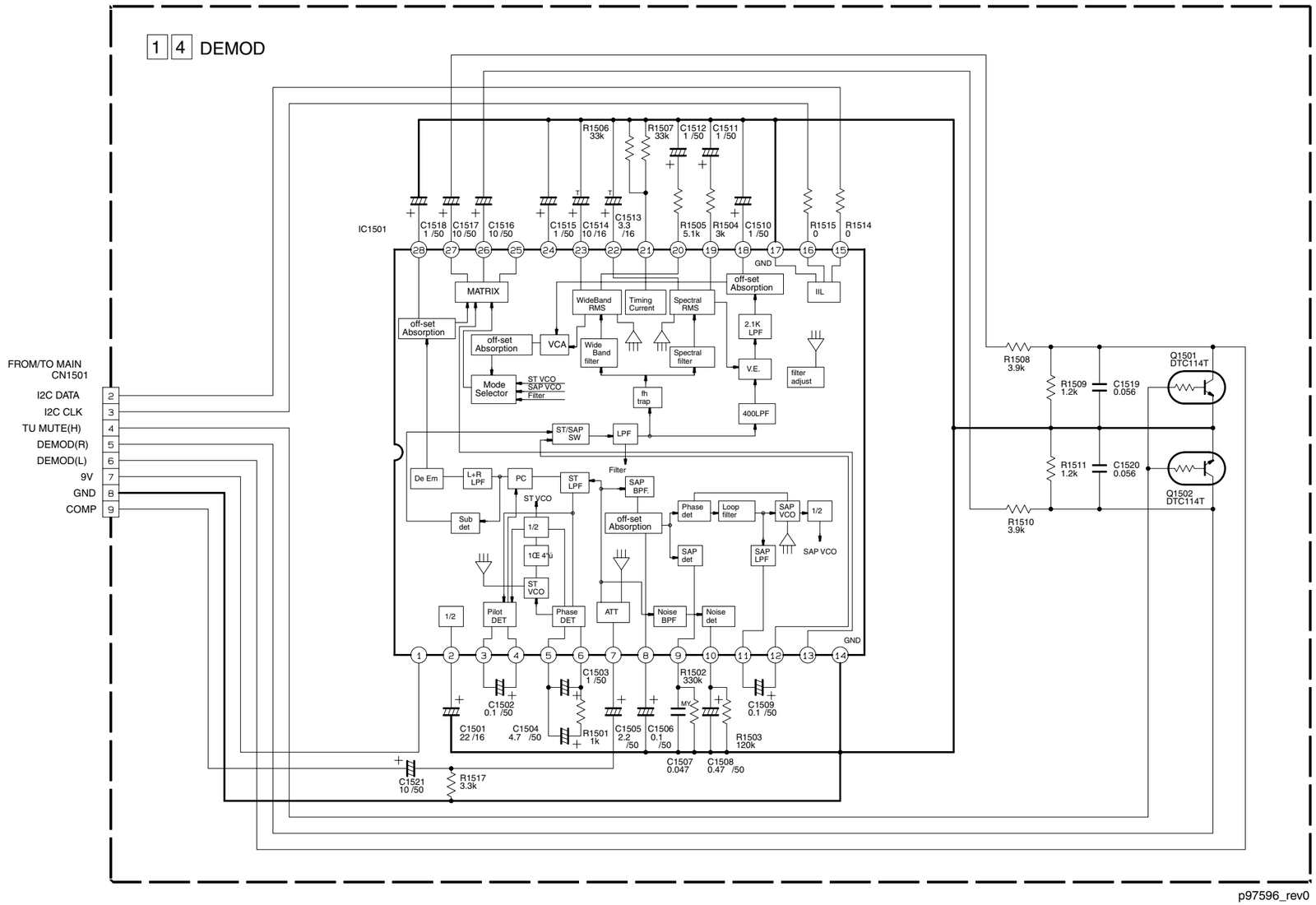
DIFFERENCE TABLE ○ : Used × : Not used

	Q7118-Q7121 R7131-R7132 R7146-R7151 R7154-R7157 R7166 R7167 C7163-C7166 CN7105 J7107-J7109	R7158 J7110
DOM	○	×
US	×	○

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ALL PNP TYPE TRANSISTORS ARE 2SA1576/QR/.
ALL NPN TYPE TRANSISTORS ARE 2SC4081/QRS/.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.12 DEMODULATOR SCHEMATIC DIAGRAM



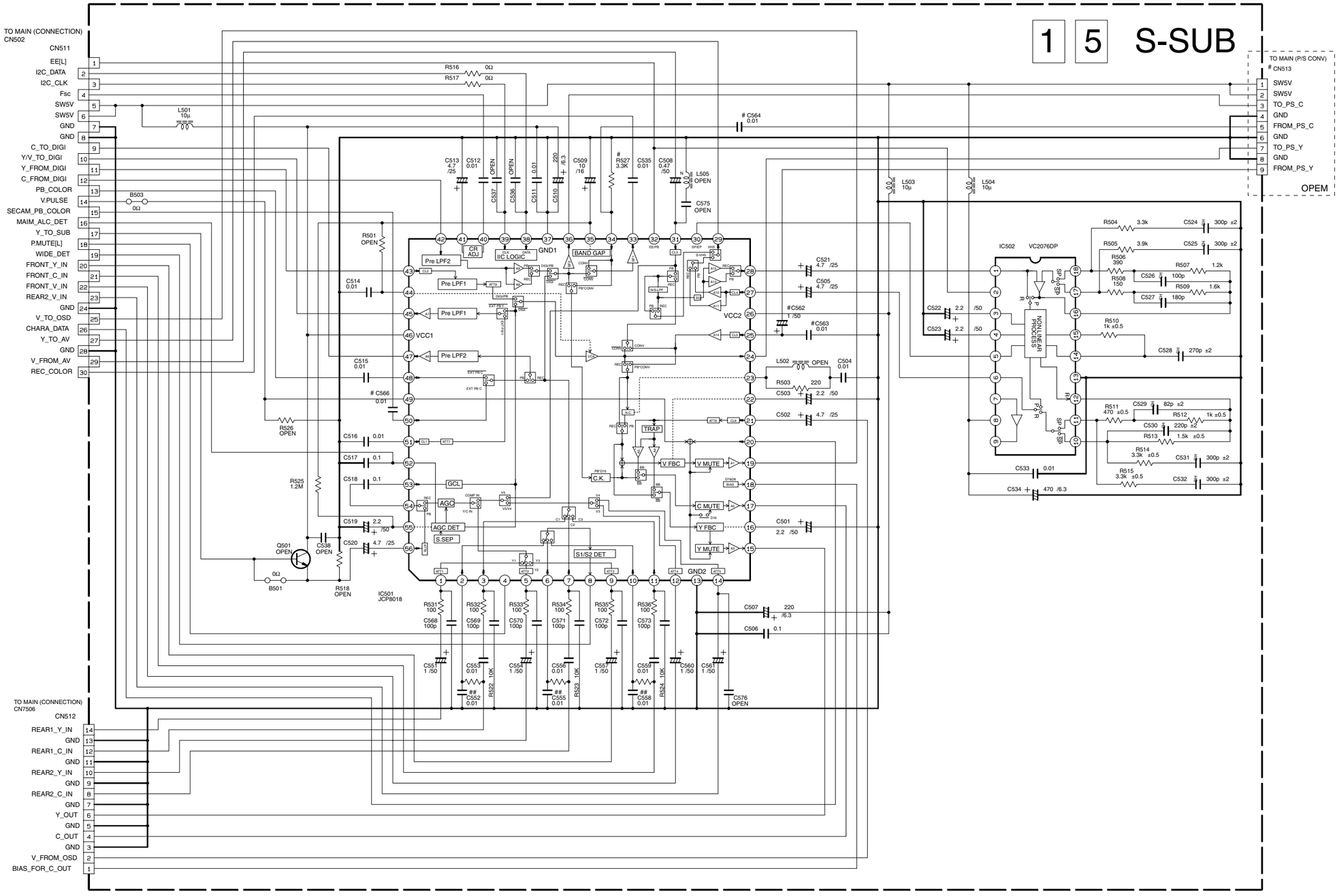
p97596_rev0

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
TANTAL

4.13 S-SUB SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



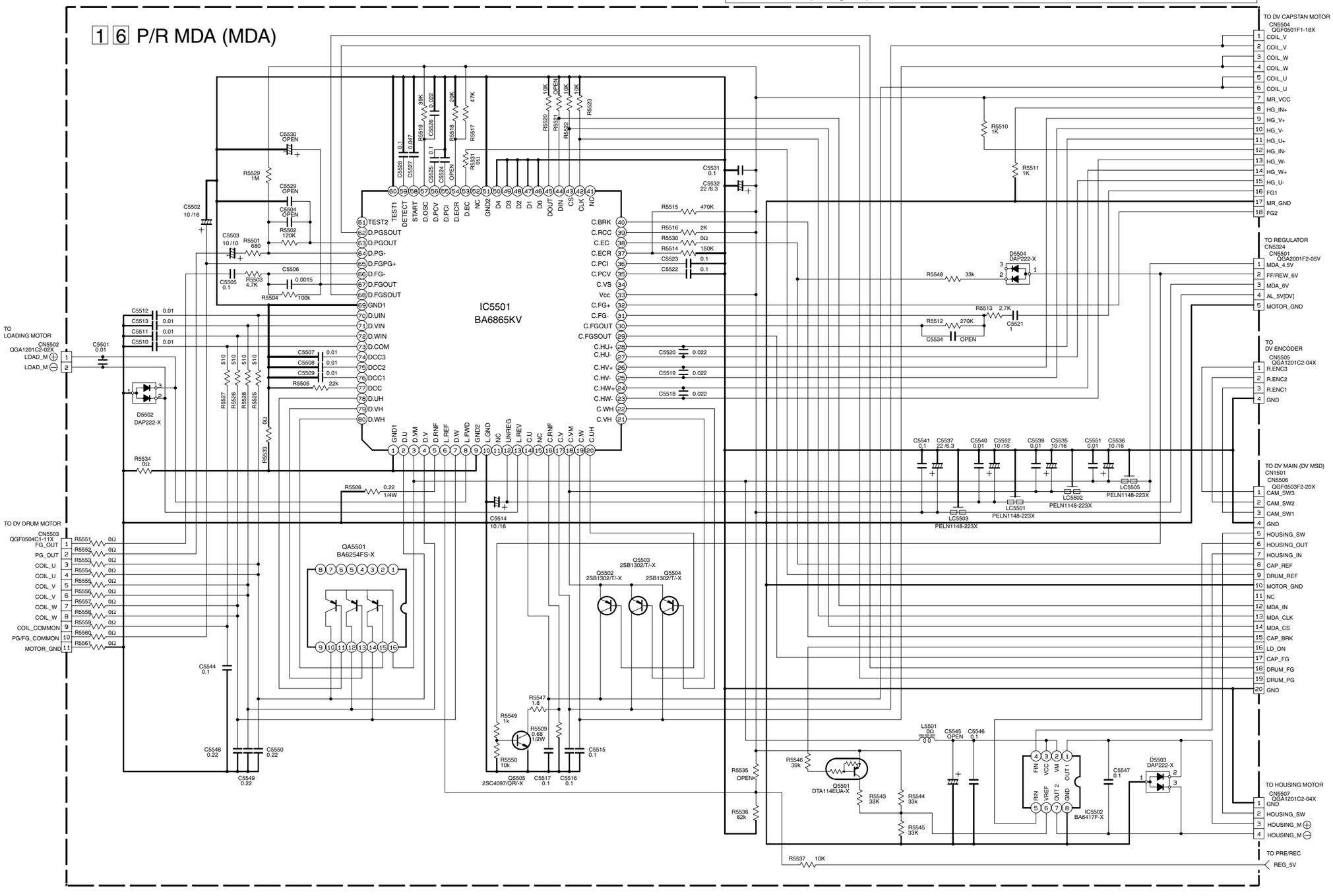
# DIFFERENCE TABLE	○ Used / × Not used	
	CN513 C562 C564 C566	C563 R527
MS	○	×
OTHERS	×	○

Marked elements may differ depending on the model. Be sure to check the Parts List.

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

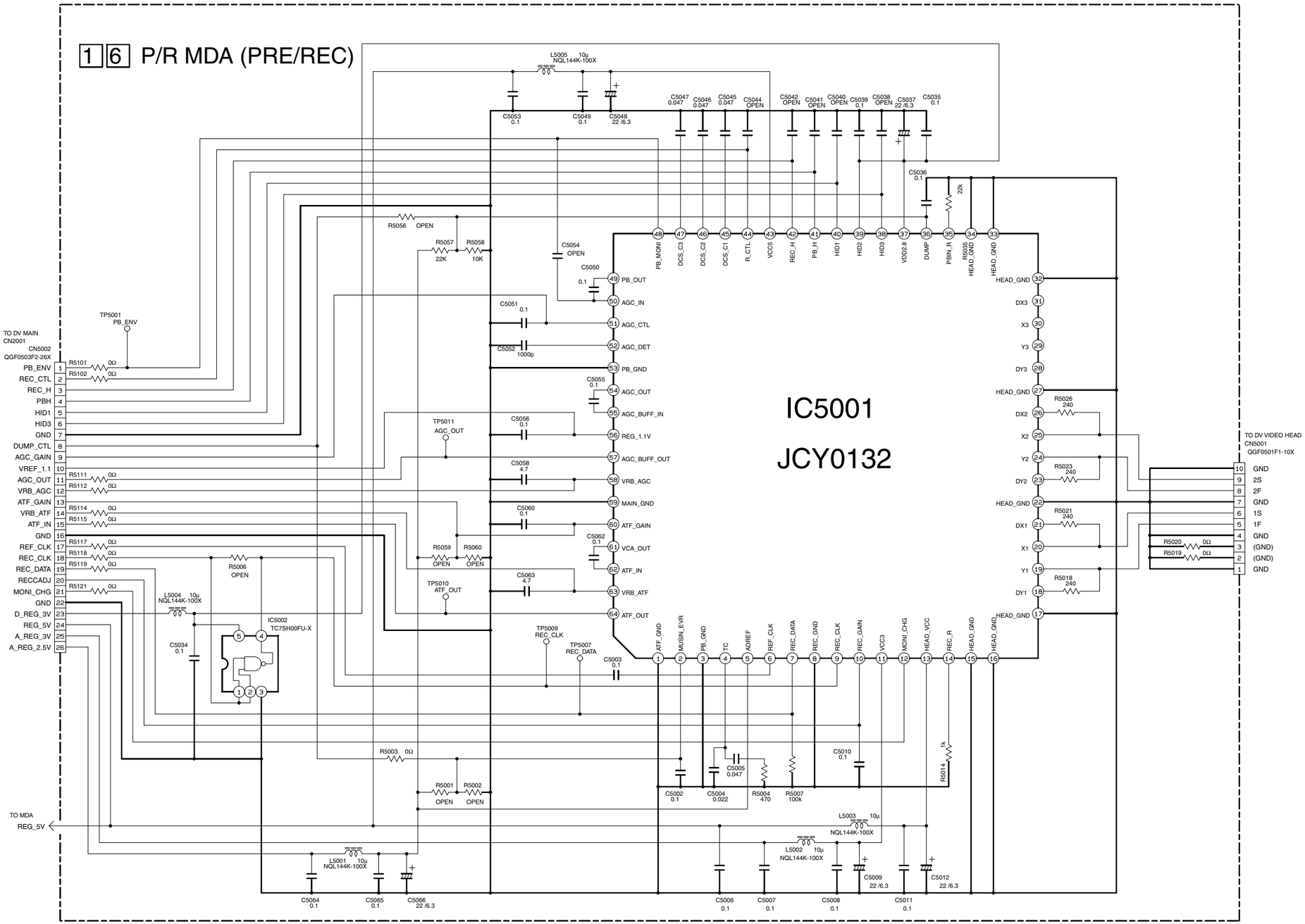
4.14 MDA SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



4.15 PRE / REC SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



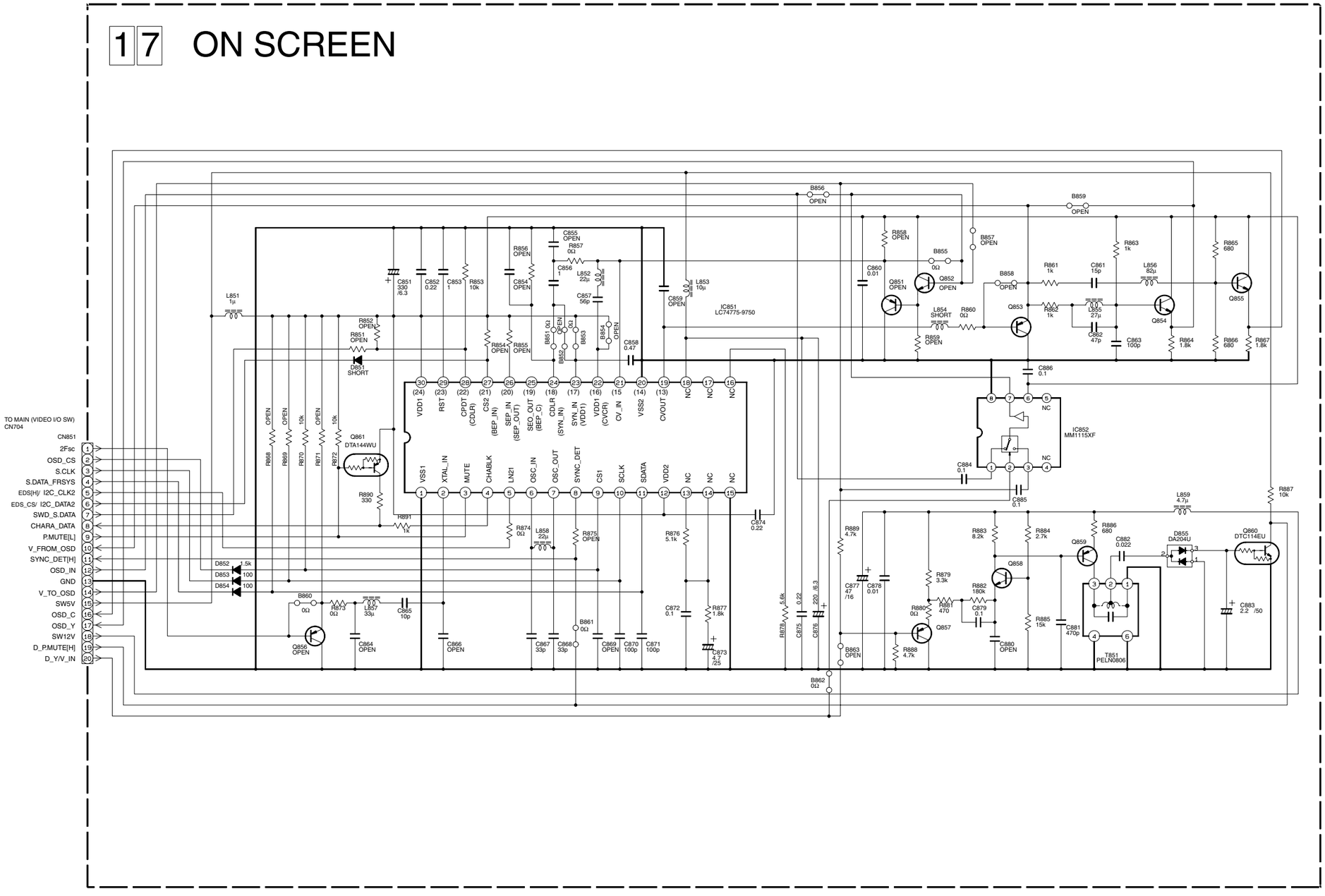
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.16 ON SCREEN SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

17 ON SCREEN



p20192001a_rev0

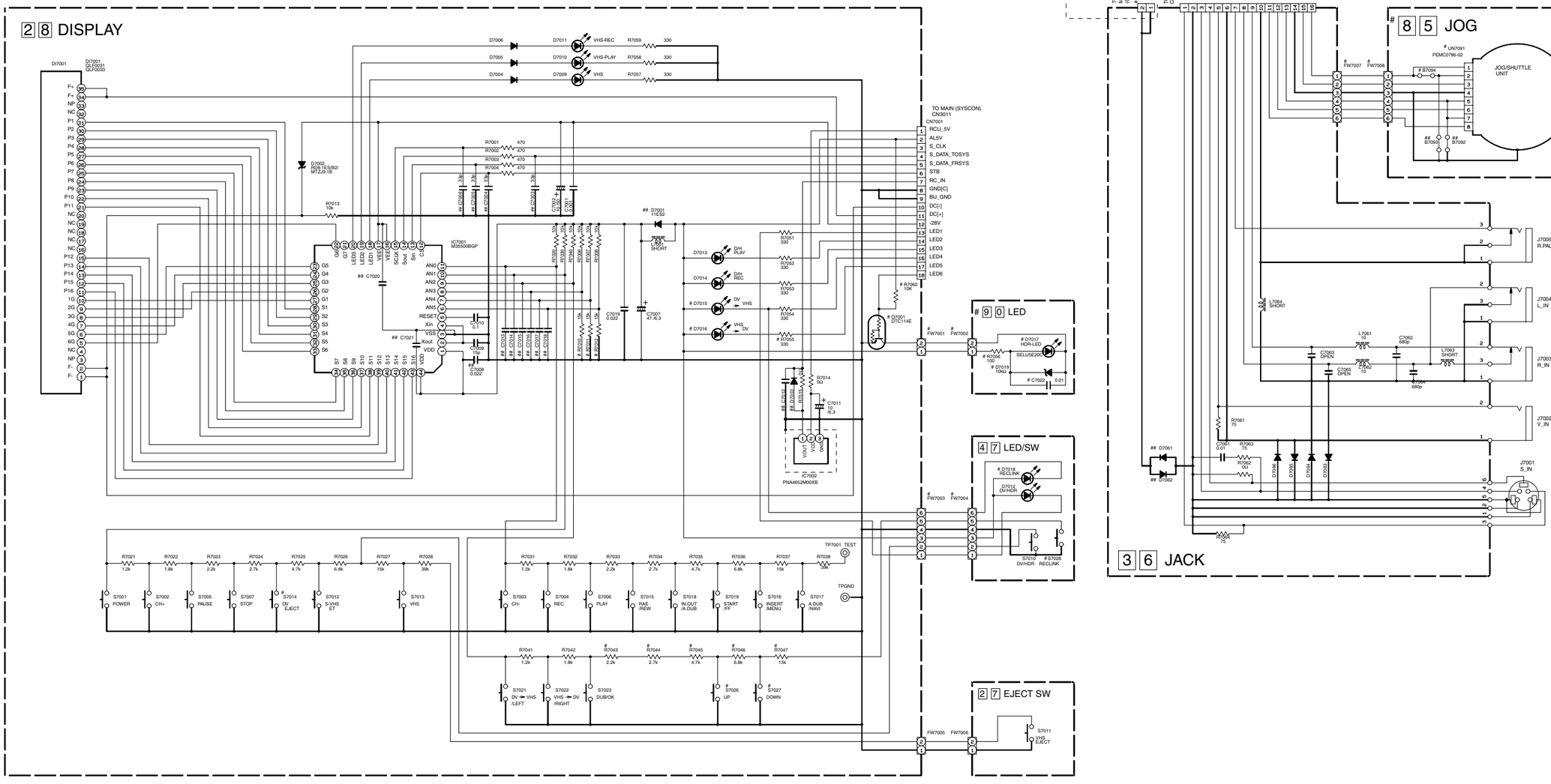
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

ALL NPN TYPE TRANSISTORS ARE 2SC4081/QRS/.
ALL PNP TYPE TRANSISTORS ARE 2SA1576A/QR/.

4.17 DISPLAY, EJECT SW, LED/SW, JACK AND JOG SCHEMATIC DAIGRAMS

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



p10309001a_rev1

DIFFERENCE TABLE

○ Used
X Not used

	8 5 JOG UN7091 B7094 FW7007 FW7008	CN7002	8 6 LED D7017 FW7001 FW7002 R7060 Q7001	D7018 S7026 S7027 S7028	R7043 R7044 R7045 R7046 R7047	S7014 D7015 D7016 R7055	FW7003 FW7004
DVS2 /VS20	○	1-16	X			○	1-4
HDS1	X	1-10	○			X	1-6

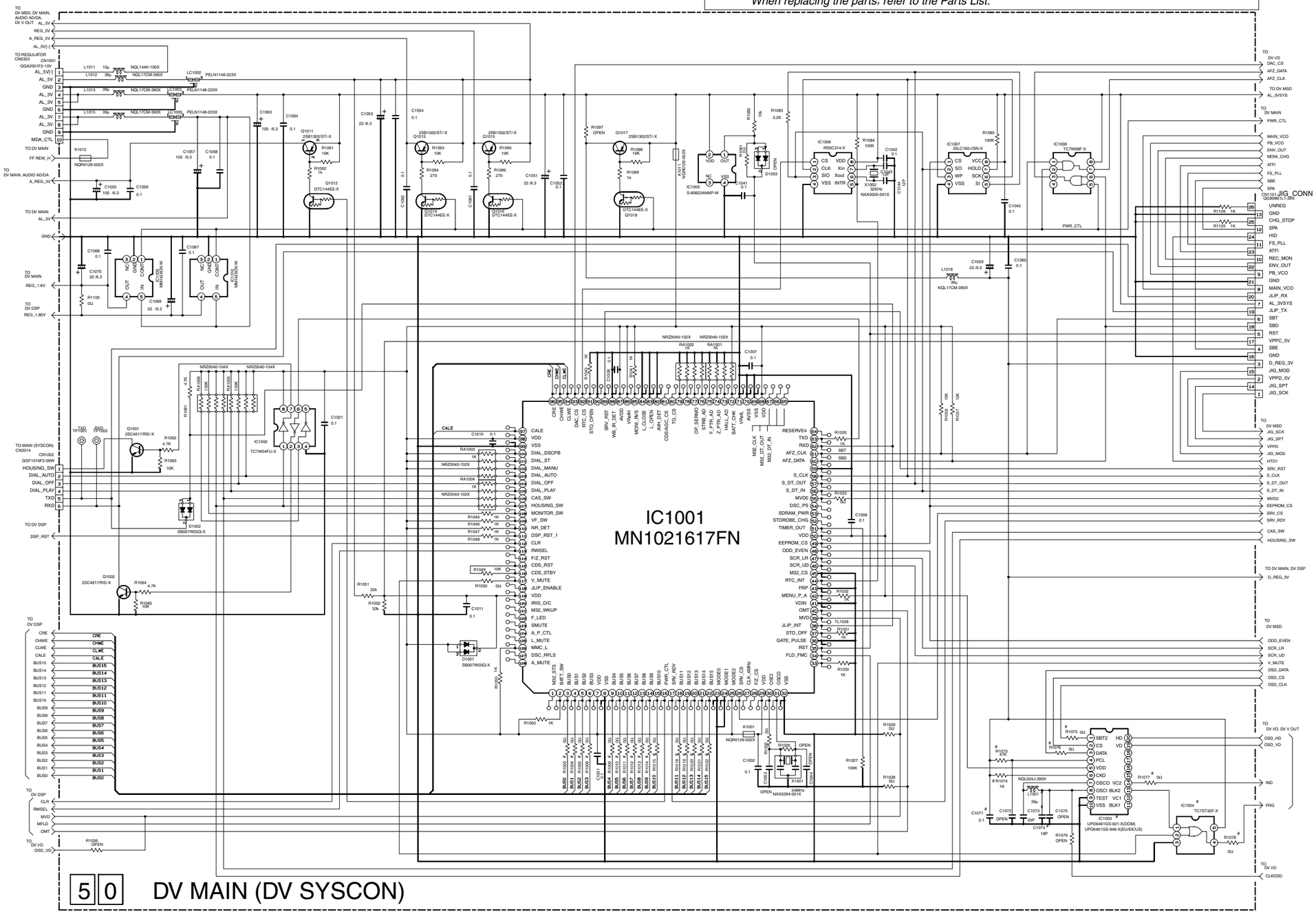
NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL DIODES ARE 1N4148M OR 1SS133
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

##:NOT USED

4.18 DV SYSTEM CONTROL SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

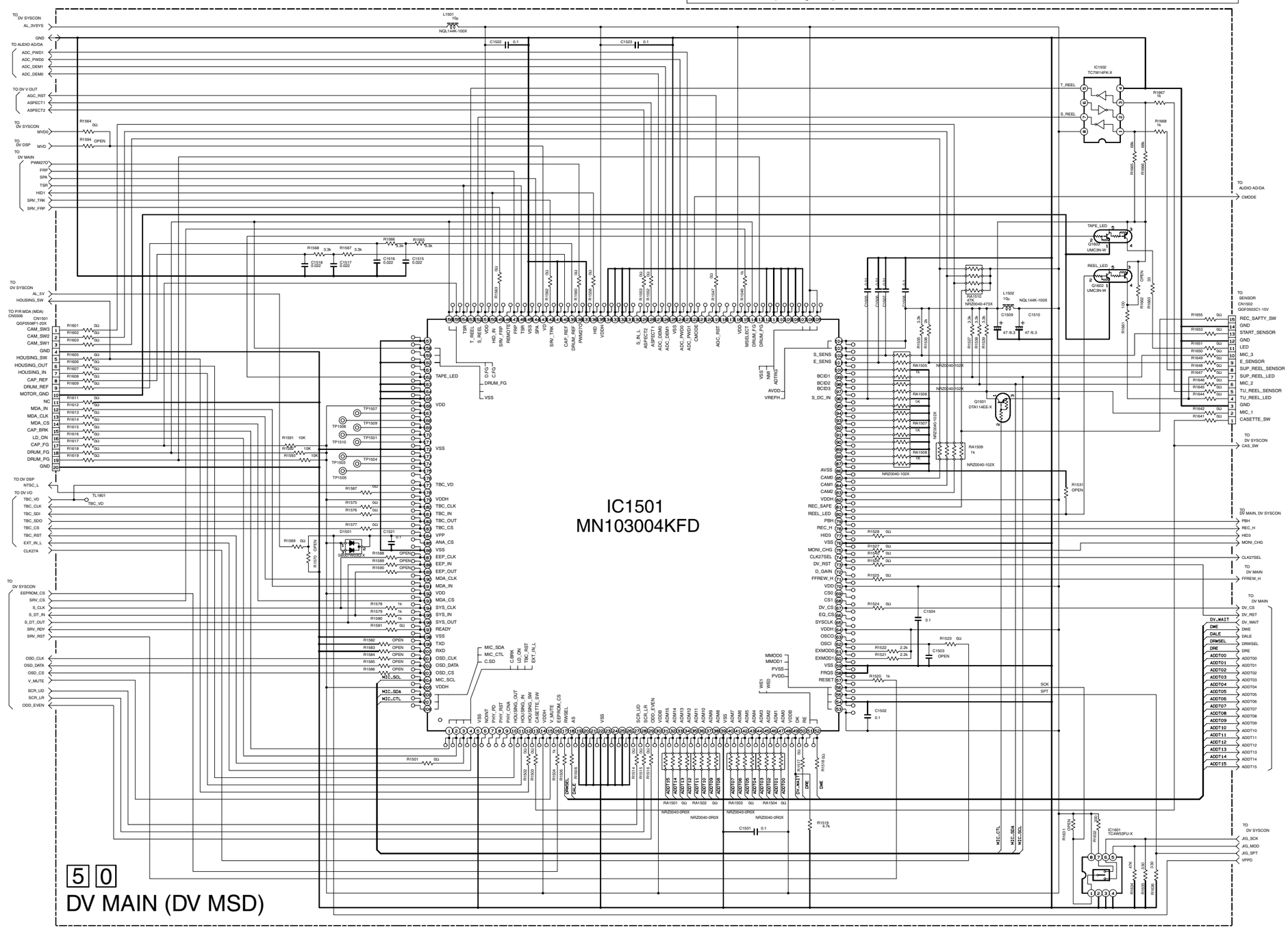


NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.19 DV MSD SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.20 DV MAIN SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

IC2001
JCY0133

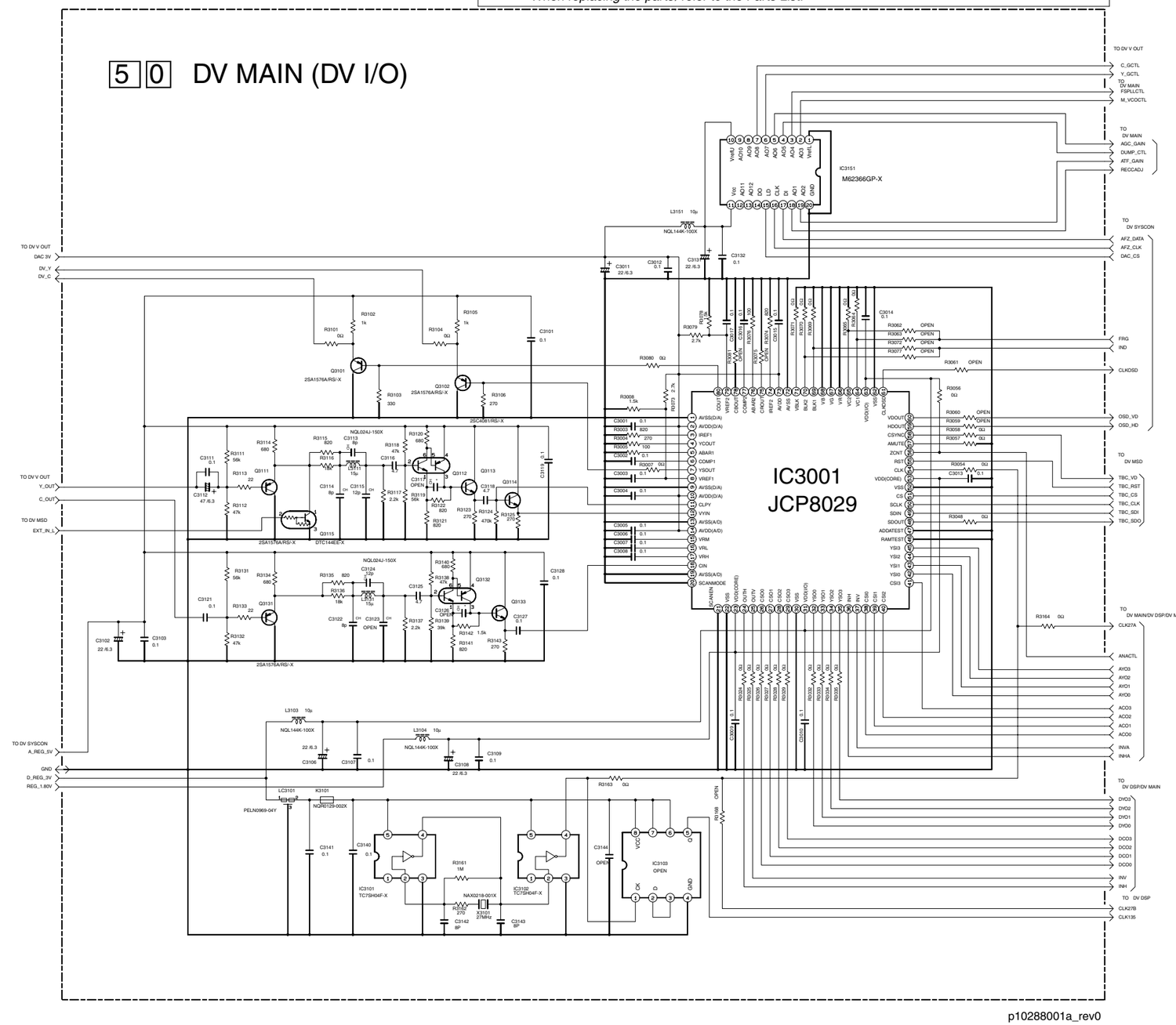
5 0 DV MAIN (DV MAIN)

p10287001a_rev0

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.
ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.21 DV I/O SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.



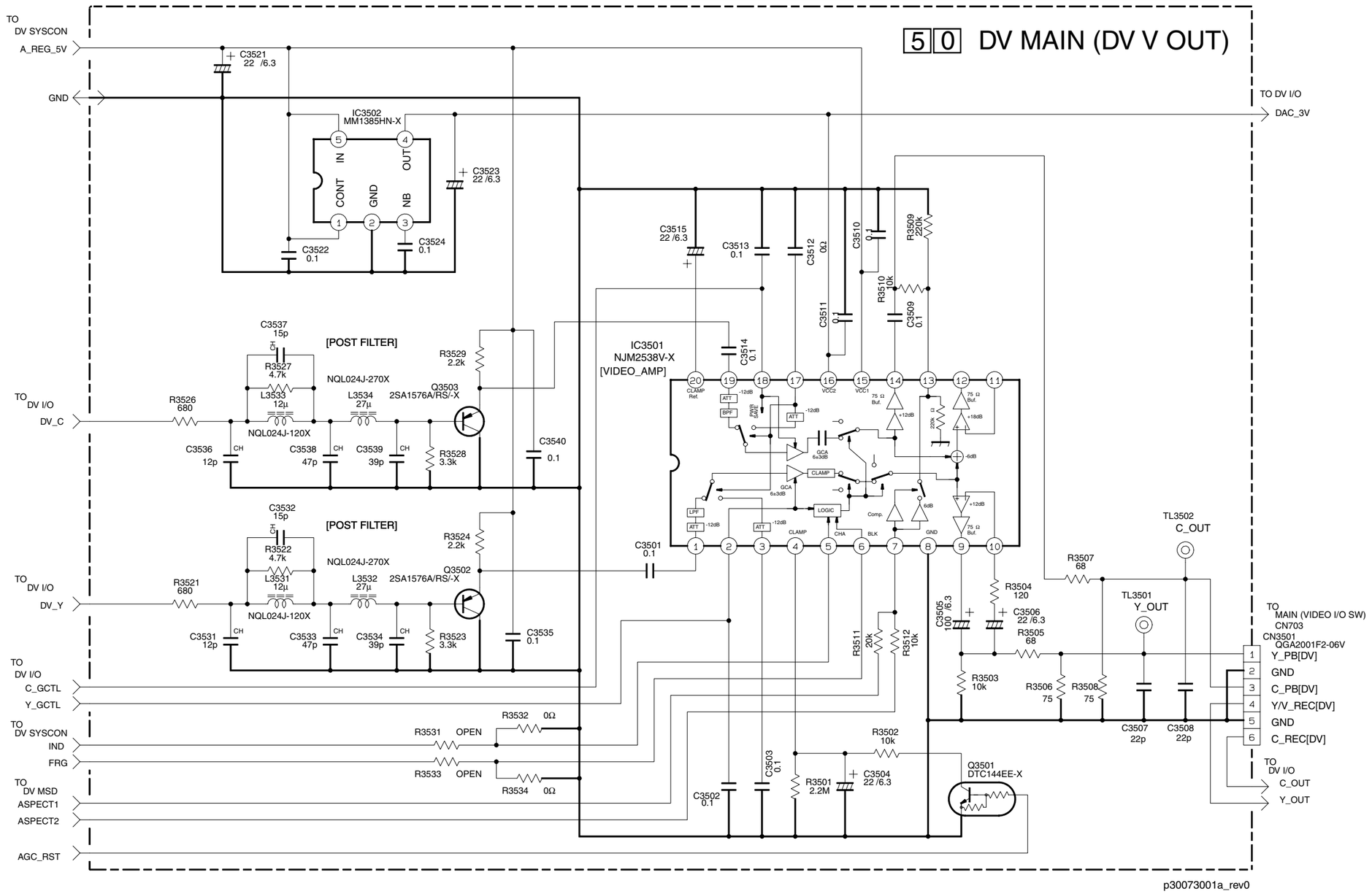
p10288001a_rev0

NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.22 DV V OUT SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

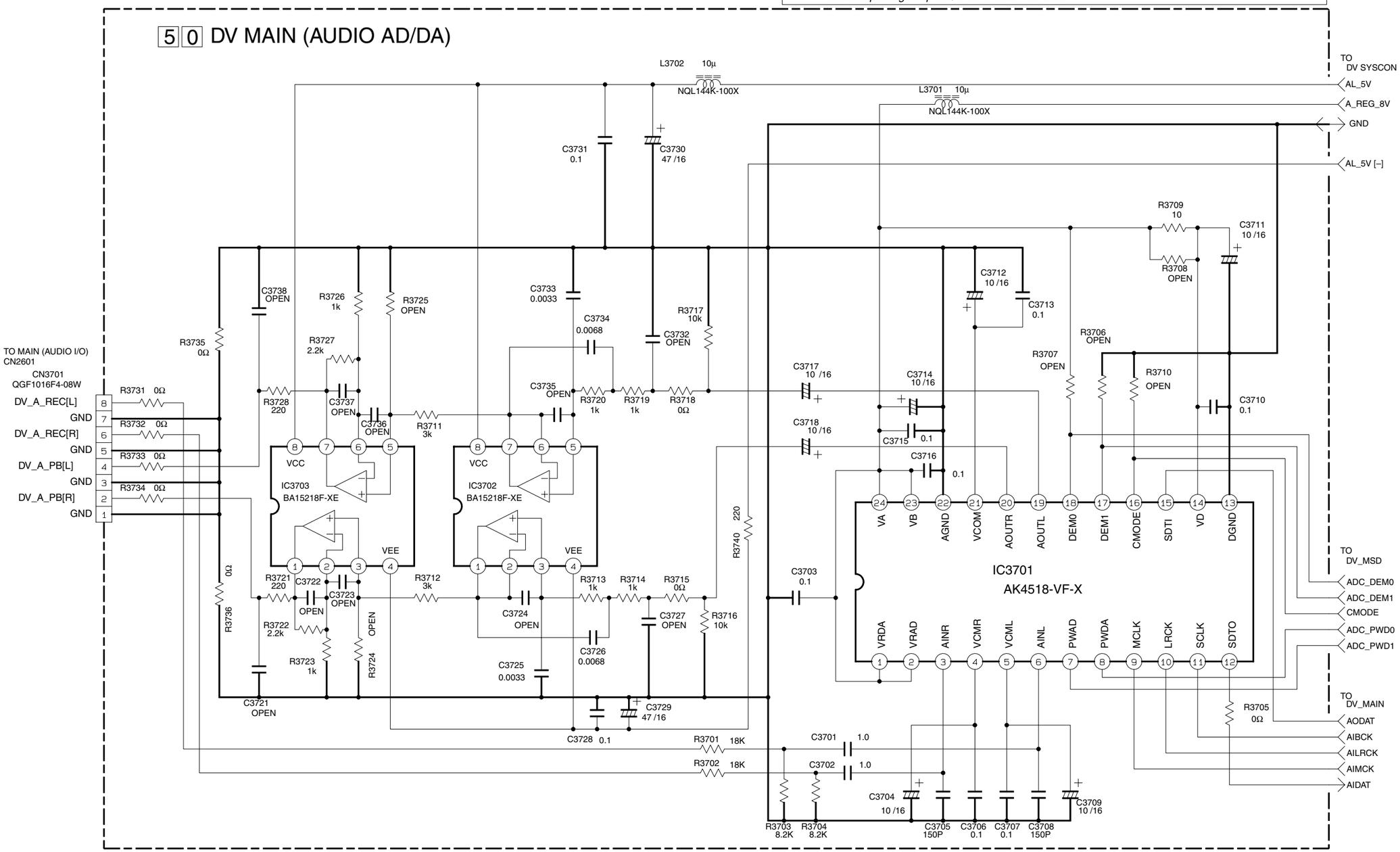


NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.23 AUDIO AD/DA SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

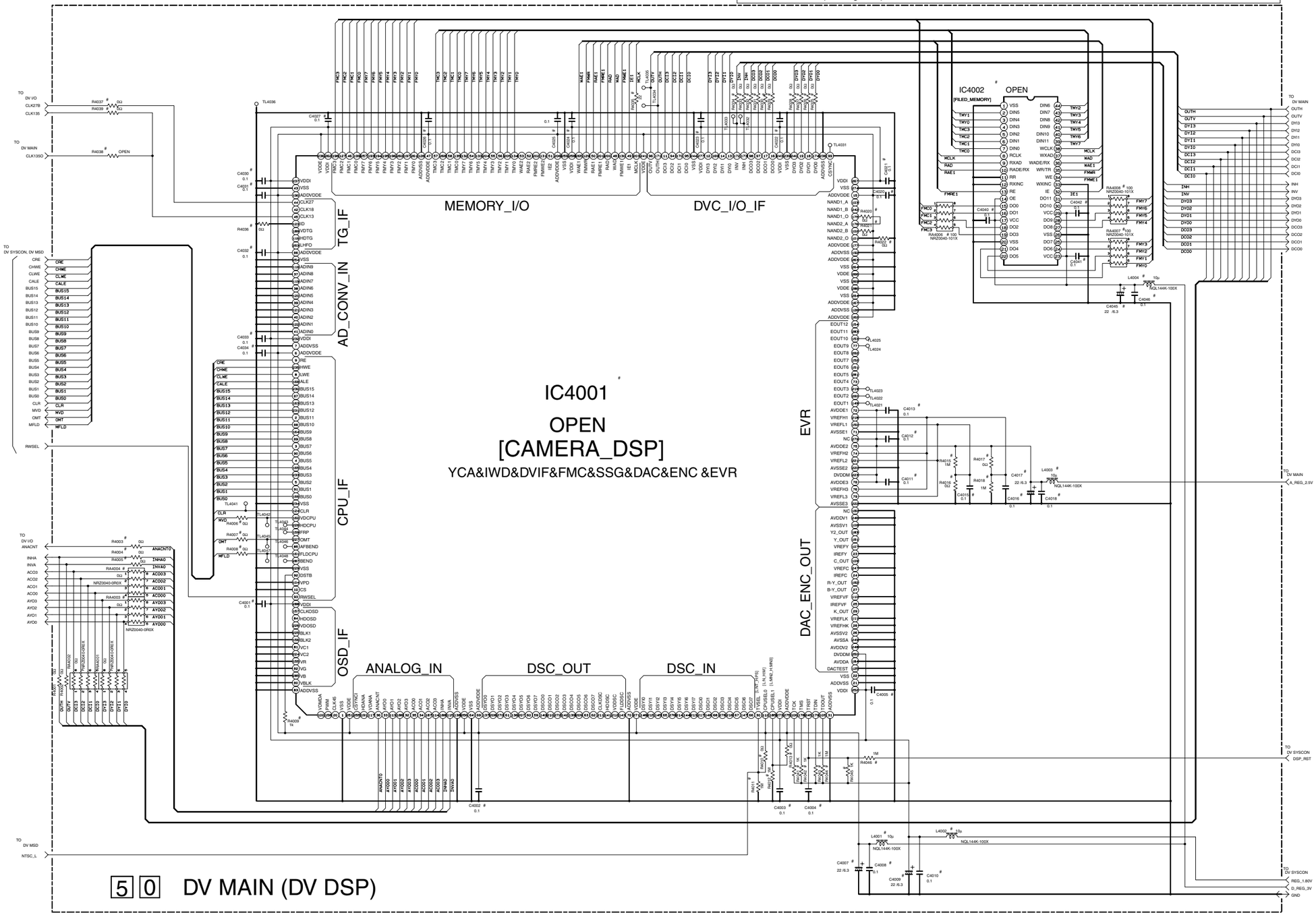


NOTES:UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN µF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.24 DV DSP SCHEMATIC DIAGRAM

Note : The Parts Number, value and rated voltage etc. in the Schematic Diagram are for references only. When replacing the parts, refer to the Parts List.

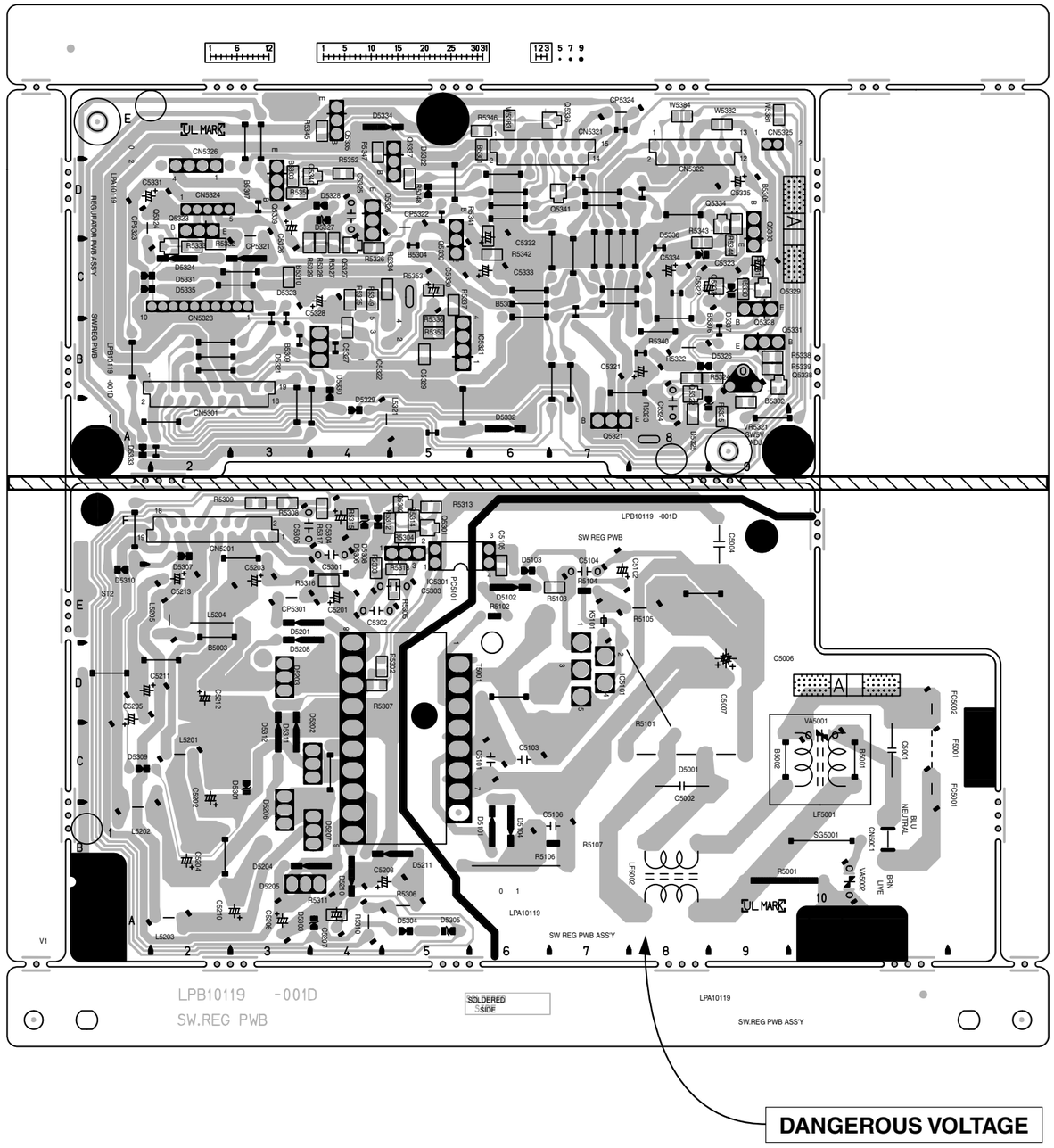


NOTES : UNLESS OTHERWISE SPECIFIED.
ALL RESISTANCE VALUES ARE IN OHMS.
ALL INDUCTANCE VALUES ARE IN H.
ALL CAPACITANCE VALUES ARE IN μF.

ELECTROLYTIC
CERAMIC
MYLER
NON POLAR

4.25 SWITCHING REGULATOR AND REGULATOR CIRCUIT BOARDS

<01> SW REG, <02> REGULATOR
LPB10119-001C



COMPONENT PARTS LOCATION GUIDE <SWITCHING REGULATOR>

REF.NO.	LOCATION		
CAPACITOR			
C5001	A	D	11D
C5002	A	D	8C
C5004	A	D	9E
C5006	A	D	8D
C5007	A	D	9D
C5101	A	D	6C
C5102	A	D	7E
C5103	A	D	6C
C5104	A	D	7E
C5105	B	C	6E
C5106	A	D	6B
C5201	A	D	4E
C5202	A	D	2B
C5203	A	D	3E
C5204	A	D	2B
C5205	A	D	1D
C5206	A	D	3A
C5207	A	D	4A
C5208	A	D	4B
C5210	A	D	3A
C5211	A	D	2D
C5212	A	D	2D
C5213	A	D	2E
C5301	A	D	4F
C5302	A	D	5E
C5303	A	D	5E
C5304	A	D	4F
C5305	A	D	3F

REF.NO.	LOCATION		
CONNECTOR			
CN5001	A	D	11B
CN5201	A	D	3F
DIODE			
D5001	A	D	7C
D5101	A	D	6B
D5102	A	D	6E
D5103	A	D	6E
D5104	A	D	6C
D5201	A	D	4E
D5202	A	D	4C
D5203	A	D	3D
D5204	A	D	4B
D5205	A	D	3A
D5206	A	D	3B
D5207	A	D	4B
D5208	A	D	4E
D5210	A	D	4B
D5211	A	D	5B
D5301	A	D	3C
D5303	A	D	4A
D5304	A	D	5A
D5305	A	D	5A
D5306	A	D	4F
D5307	A	D	2F
D5308	A	D	4F
D5309	A	D	1C
D5310	A	D	1E

REF.NO.	LOCATION		
D5311	A	D	3C
D5312	A	D	3C
IC			
IC5101	A	D	7E
IC5301	A	D	5F
COIL			
L5201	A	D	2C
L5202	A	D	2B
L5203	A	D	2A
L5204	A	D	3E
L5205	A	D	2E
TRANSISTOR			
Q5301	B	C	5F
Q5302	B	C	5F
RESISTOR			
R5001	A	D	9B
R5101	A	D	8C
R5102	A	D	6E
R5103	B	C	7E
R5104	A	D	7E
R5105	A	D	7E
R5106	A	D	5B
R5107	A	D	7B
R5302	B	C	4D
R5303	B	C	4E
R5304	B	C	5F
R5305	B	C	5E

REF.NO.	LOCATION		
R5306	A	D	5A
R5307	B	C	4D
R5308	B	C	3F
R5309	B	C	3F
R5310	A	D	4A
R5311	B	C	4A
R5312	B	C	5F
R5313	B	C	5F
R5314	B	C	5F
R5315	B	C	4F
R5316	B	C	4E
R5317	B	C	4F
R5318	B	C	5E
OTHER			
CP5301	A	D	3E
F5001	A	D	11C
FC5001	A	D	11C
FC5002	A	D	11D
K5101	A	D	7E
LF5001	A	D	10C
LF5002	A	D	8B
PC5101	A	D	5F
SG5001	A	D	9B
T5001	A	D	5D
VA5001	A	D	10C
VA5002	A	D	10A

COMPONENT PARTS LOCATION GUIDE <REGULATOR>

REF.NO.	LOCATION		
CAPACITOR			
C5321	A	D	7B
C5322	A	D	9C
C5323	A	D	9C
C5324	A	D	8A
C5325	A	D	4D
C5326	A	D	3D
C5327	B	C	4B
C5328	A	D	3C
C5329	B	C	5B
C5330	A	D	5C
C5331	A	D	2D
C5332	A	D	6D
C5333	A	D	6C
C5334	A	D	8C
C5335	A	D	9D
CONNECTOR			
CN5301	A	D	1B
CN5321	A	D	6E
CN5322	A	D	8E
CN5323	A	D	3C
CN5324	A	D	2D
CN5325	A	D	9E
CN5326	A	D	2D
DIODE			
D5321	A	D	4B
D5322	A	D	5D

REF.NO.	LOCATION		
D5323	A	D	3C
D5324	A	D	2C
D5325	A	D	9B
D5326	A	D	9B
D5327	A	D	4D
D5328	A	D	4D
D5329	A	D	4A
D5330	A	D	4A
D5331	A	D	1C
D5332	A	D	6A
D5333	A	D	1A
D5334	A	D	4E
D5335	A	D	1C
D5336	A	D	8C
D5337	A	D	9C
IC			
IC5321	A	D	5B
IC5322	A	D	4B
COIL			
L5321	A	D	4A
TRANSISTOR			
Q5321	A	D	7A
Q5322	B	C	8B
Q5323	A	D	2D
Q5324	B	C	2C
Q5326	A	D	4D
Q5327	B	C	4C

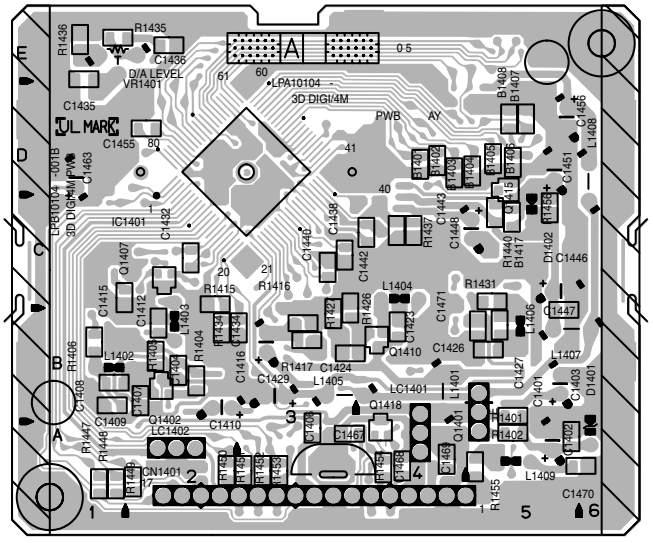
REF.NO.	LOCATION		
Q5328	A	D	9C
Q5329	B	C	9C
Q5330	A	D	5C
Q5331	A	D	9B
Q5332	B	C	9C
Q5333	A	D	9C
Q5334	B	C	9D
Q5335	A	D	4E
Q5336	B	C	7E
Q5337	A	D	5E
Q5338	B	C	9B
Q5339	A	D	3D
Q5340	B	C	4D
Q5341	B	C	7D
RESISTOR			
R5322	B	C	8B
R5323	B	C	8A
R5324	B	C	9B
R5325	B	C	9A
R5326	B	C	4C
R5327	B	C	4C
R5328	B	C	4C
R5329	B	C	3C
R5330	B	C	9C
R5331	B	C	9C
R5332	B	C	2C
R5333	B	C	2C
R5334	B	C	4C

REF.NO.	LOCATION		
R5335	B	C	4C
R5336	B	C	5B
R5337	B	C	5C
R5338	B	C	9B
R5339	B	C	9B
R5340	A	D	8B
R5341	B	C	6D
R5342	B	C	6C
R5343	B	C	8C
R5344	B	C	9C
R5345	B	C	4E
R5346	B	C	6E
R5347	B	C	4E
R5348	B	C	5D
R5349	B	C	4C
R5350	B	C	5B
R5351	B	C	3D
R5352	B	C	4D
R5353	B	C	5C
VR5321	A	D	9B
OTHER			
CP5321	A	D	3D
CP5322	A	D	5D
CP5323	A	D	1C
CP5324	A	D	8E

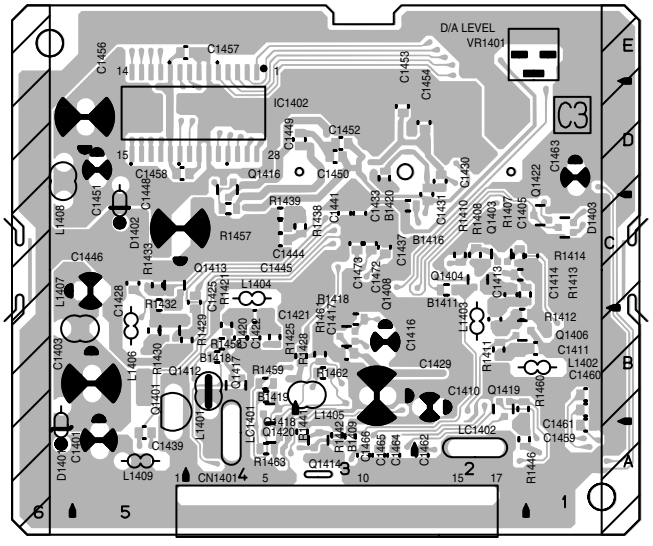
4.26 3D DIGITAL/4M IRCUIT BOARDS

<05> 3D DIGITAL/4M
LPB10104-001B

– FOIL SIDE(B) –



– COMPONENT SIDE(A) –

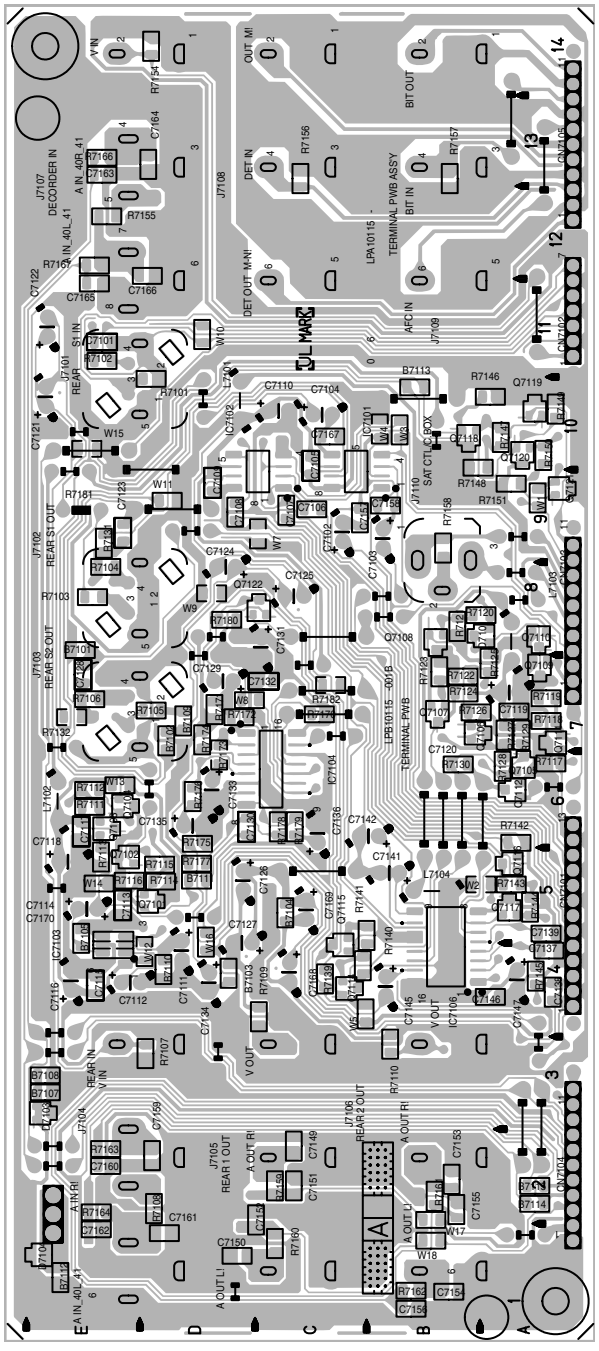


COMPONENT PARTS LOCATION GUIDE <3D DIGITAL/4M>

REF.NO.	LOCATION		
CAPACITOR			
C1401	A	D	5A
C1402	B	C	5A
C1403	A	D	5B
C1404	B	C	2B
C1405	A	C	1C
C1406	B	C	3A
C1407	B	C	2B
C1408	B	C	1B
C1409	B	C	1B
C1410	A	D	2B
C1411	A	C	1B
C1412	B	C	2B
C1413	A	C	2B
C1414	A	C	2C
C1415	B	C	1C
C1416	A	D	3B
C1417	A	C	3B
C1420	A	C	4B
C1421	A	C	4B
C1422	A	C	4B
C1423	B	C	4B
C1424	B	C	3B
C1425	A	C	4C
C1426	B	C	5B
C1427	B	C	5B
C1428	A	C	5C
C1429	A	D	3B
C1430	A	C	2D
C1431	A	C	2D
C1432	B	C	2C
C1433	A	C	3C
C1434	B	C	3B
C1435	B	C	1E
C1436	B	C	2E
C1437	A	C	3C
C1438	B	C	3C
C1439	A	C	5A
C1440	B	C	3C
C1441	A	C	3C
C1442	B	C	4C
C1443	B	C	4C
C1444	A	C	4C
C1445	A	C	4C
C1446	A	D	5C
C1447	B	C	5B
C1448	A	D	5C
C1449	A	C	4D
C1450	A	C	3D
C1451	A	D	5D
C1452	A	C	3D
C1453	A	C	3D
C1454	A	C	2D
C1455	B	C	2D
C1456	A	D	5D
C1457	A	C	5E
C1458	A	C	5D
C1459	A	C	1A
C1460	A	C	1B
C1461	A	C	1B
C1462	A	C	2A
C1463	A	D	1D
C1464	A	C	3A
C1465	A	C	3A
C1466	A	C	3A
C1467	B	C	3A
C1468	B	C	4A
C1469	B	C	4A
C1470	B	C	6A
C1471	B	C	5B
C1472	A	C	3C
C1473	A	C	3C
CONNECTOR			
CN1401	A	D	5A
DIODE			
D1401	A	D	6B
D1402	A	D	5D
D1403	A	C	1C
IC			
IC1401	B	C	3D
IC1402	A	C	4D
COIL			
L1401	A	D	4B
L1402	A	D	1B
L1403	A	D	2B
L1404	A	D	4C
L1405	A	D	4B
L1406	A	D	5B
L1407	A	D	6B
L1408	A	D	6C
L1409	A	D	5A
TRANSISTOR			
Q1401	A	D	5B
Q1402	B	C	2B
Q1403	A	C	2C
Q1404	A	C	2C
Q1406	A	C	2B
Q1407	B	C	2C
Q1408	A	C	3B
Q1410	B	C	4B
Q1412	A	C	5B
Q1413	A	C	5C
Q1414	A	C	3A
Q1415	B	C	5D
Q1416	A	C	4D
Q1417	A	C	4B
Q1418	B	C	4A
Q1419	A	C	2B
Q1420	A	C	4A
Q1421	A	C	4B
Q1422	A	C	1C
RESISTOR			
R1401	B	C	5B
R1402	B	C	5A
R1404	B	C	2B
R1405	B	C	2B
R1406	B	C	1B
R1407	A	C	2C
R1408	A	C	2C
R1410	A	C	2C
R1411	A	C	2B
R1412	A	C	2B
R1413	A	C	2C
R1414	A	C	2C
R1415	B	C	2C
R1416	B	C	3B
R1417	B	C	3B
R1418	A	C	3B
R1421	A	C	4B
R1425	A	C	4B
R1426	B	C	3C
R1427	B	C	3B
R1428	A	C	3B
R1429	A	C	4B
R1430	A	C	5B
R1431	B	C	5C
R1432	A	C	5C
R1433	A	C	5C
R1434	B	C	2B
R1435	B	C	1E
R1436	B	C	1E
R1437	B	C	4C
R1438	A	C	3C
R1439	A	C	4C
R1440	B	C	5C
R1441	A	C	3A
R1442	A	C	3A
R1446	A	C	2A
R1447	B	C	1A
R1448	B	C	1A
R1449	B	C	2A
R1450	B	C	2A
R1451	B	C	3A
R1452	B	C	3A
R1453	B	C	3A
R1454	B	C	4A
R1455	B	C	5A
R1456	B	C	5C
R1457	A	C	4C
R1458	A	C	4B
R1459	A	C	4B
R1460	A	C	2B
R1461	A	C	3B
R1462	A	C	3B
R1463	A	C	4A
VR1401	A	D	1E
OTHER			
LC1401	A	D	4A
LC1402	A	D	2A

4.27 TERMINAL CIRCUIT BOARD

<06> TERMINAL
LPB10115-001B



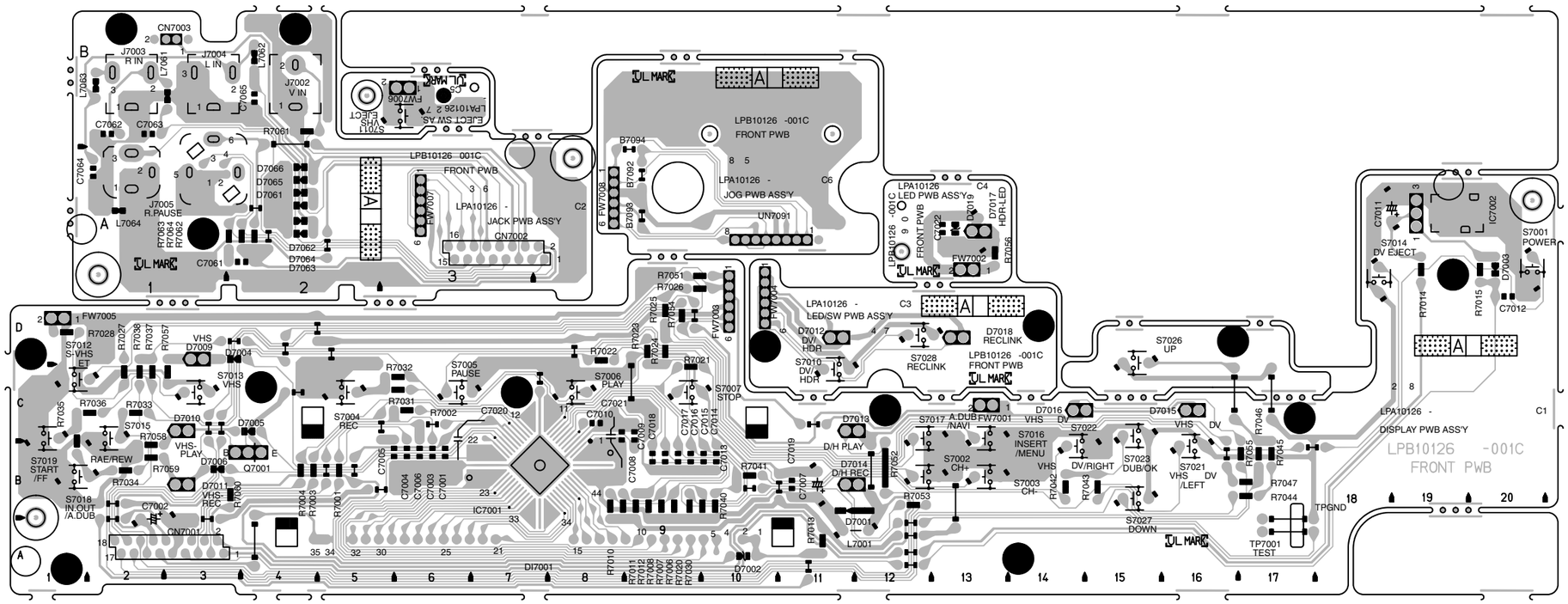
COMPONENT PARTS LOCATION GUIDE
<TERMINAL>

REF.NO.	LOCATION		
CAPACITOR			
C7101	B	C	10E
C7102	A	D	8C
C7103	A	D	8B
C7104	A	D	10C
C7105	B	C	9C
C7106	B	C	9C
C7107	B	C	9C
C7108	B	C	9D
C7109	B	C	9D
C7110	A	D	10C
C7111	A	D	4D
C7112	A	D	4E
C7113	B	C	5E
C7114	A	D	5E
C7115	B	C	4E
C7116	A	D	4E
C7117	B	C	5E
C7118	A	D	5E
C7119	B	C	7A
C7120	A	D	7A
C7121	A	D	10E
C7122	A	D	10E
C7123	B	C	8E
C7124	A	D	8D
C7125	A	D	8C
C7126	A	D	5D
C7127	A	D	4D
C7128	B	C	7E
C7129	A	D	7D
C7130	B	C	6D
C7131	A	D	7C
C7132	B	C	7C
C7133	A	D	6D
C7134	A	D	4D
C7135	A	D	6D
C7136	A	D	5C
C7137	B	C	4A
C7138	B	C	4A
C7139	B	C	4A
C7141	A	D	5B
C7142	A	D	5B
C7145	A	D	4B
C7146	B	C	4A
C7147	A	D	4A
C7149	B	C	2C
C7150	B	C	1D
C7151	B	C	2C
C7152	B	C	2C
C7153	B	C	2B
C7154	B	C	1B
C7155	B	C	2B
C7156	B	C	1B
C7157	B	C	9C
C7158	B	C	9B
C7159	B	C	2D
C7160	B	C	2E
C7161	B	C	2D
C7162	B	C	2E
C7163	B	C	12E
C7164	B	C	12D
C7165	B	C	11E
C7166	B	C	11D
C7167	B	C	9C
C7168	A	D	4C
C7169	A	D	5C
C7170	A	D	5E

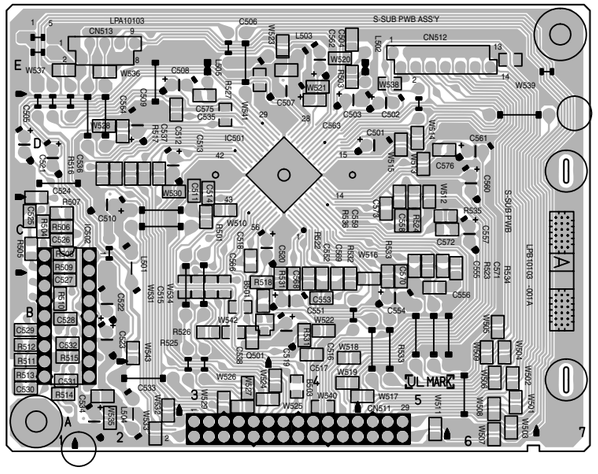
REF.NO.	LOCATION		
CONNECTOR			
CN7101	A	D	4A
CN7102	A	D	10A
CN7103	A	D	7A
CN7104	A	D	1A
CN7105	A	D	11A
DIODE			
D7101	B	C	7A
D7103	B	C	3E
D7104	B	C	1E
IC			
IC7101	B	C	9C
IC7102	B	C	9C
IC7103	B	C	4E
IC7104	B	C	6C
IC7106	B	C	4B
JACK			
J7101	A	D	10E
J7102	A	D	8E
J7103	A	D	7E
J7104	A	D	2E
J7105	A	D	2C
J7106	A	D	2B
J7107	A	D	12E
J7108	A	D	12C
J7109	A	D	12B
J7110	A	D	8B
COIL			
L7101	A	D	10D
L7102	A	D	6E
L7103	A	D	8A
L7104	A	D	5B
TRANSISTOR			
Q7101	B	C	5D
Q7102	B	C	5E
Q7103	B	C	6E
Q7104	B	C	6E
Q7105	B	C	6A
Q7106	B	C	6B
Q7107	B	C	7B
Q7108	B	C	7B
Q7109	B	C	7A
Q7110	B	C	7A
Q7111	B	C	6A
Q7112	B	C	6A
Q7114	B	C	4C
Q7115	B	C	4C
Q7116	B	C	5A
Q7117	B	C	5A
Q7118	B	C	9B
Q7119	B	C	10A
Q7120	B	C	9A
Q7121	B	C	9A
Q7122	B	C	8C
RESISTOR			
R7101	B	C	10D
R7102	B	C	10E
R7103	B	C	8E
R7104	B	C	8E
R7105	B	C	7D
R7106	B	C	7E
R7107	B	C	3D
R7108	B	C	2D
R7109	B	C	4C
R7110	B	C	3B

REF.NO.	LOCATION		
R7111	B	C	6E
R7112	B	C	6E
R7113	B	C	5E
R7114	B	C	5D
R7115	B	C	5D
R7116	B	C	5E
R7117	B	C	6A
R7118	B	C	7A
R7119	B	C	7A
R7120	B	C	8A
R7121	B	C	7B
R7122	B	C	7B
R7123	B	C	7B
R7124	B	C	7B
R7125	B	C	7A
R7126	B	C	7B
R7127	B	C	6A
R7128	B	C	6A
R7129	B	C	6A
R7130	B	C	6B
R7131	B	C	8E
R7132	B	C	7E
R7139	B	C	4C
R7140	B	C	4C
R7141	B	C	4C
R7142	B	C	5A
R7143	B	C	5A
R7144	B	C	5A
R7145	B	C	4A
R7146	B	C	10A
R7147	B	C	9A
R7148	B	C	9B
R7149	B	C	10A
R7150	B	C	9A
R7151	B	C	9A
R7154	B	C	13D
R7155	B	C	12E
R7156	B	C	12C
R7157	B	C	12B
R7158	B	C	8B
R7159	B	C	2C
R7160	B	C	1C
R7161	B	C	2B
R7162	B	C	1B
R7163	B	C	2E
R7164	B	C	2E
R7166	B	C	12E
R7167	B	C	11E
R7170	B	C	7C
R7171	B	C	7D
R7172	B	C	7D
R7173	B	C	6D
R7174	B	C	6D
R7175	B	C	5D
R7176	B	C	6D
R7177	B	C	5D
R7178	B	C	6C
R7179	B	C	6C
R7180	B	C	8D
R7181	A	D	9E
R7182	B	C	7C

<27> EJECT SW, <28> DISPLAY, <36> JACK, <47> LED/SW, <85> JOG
LPB10126-001C



<15> S-SUB
LPB10103-001A

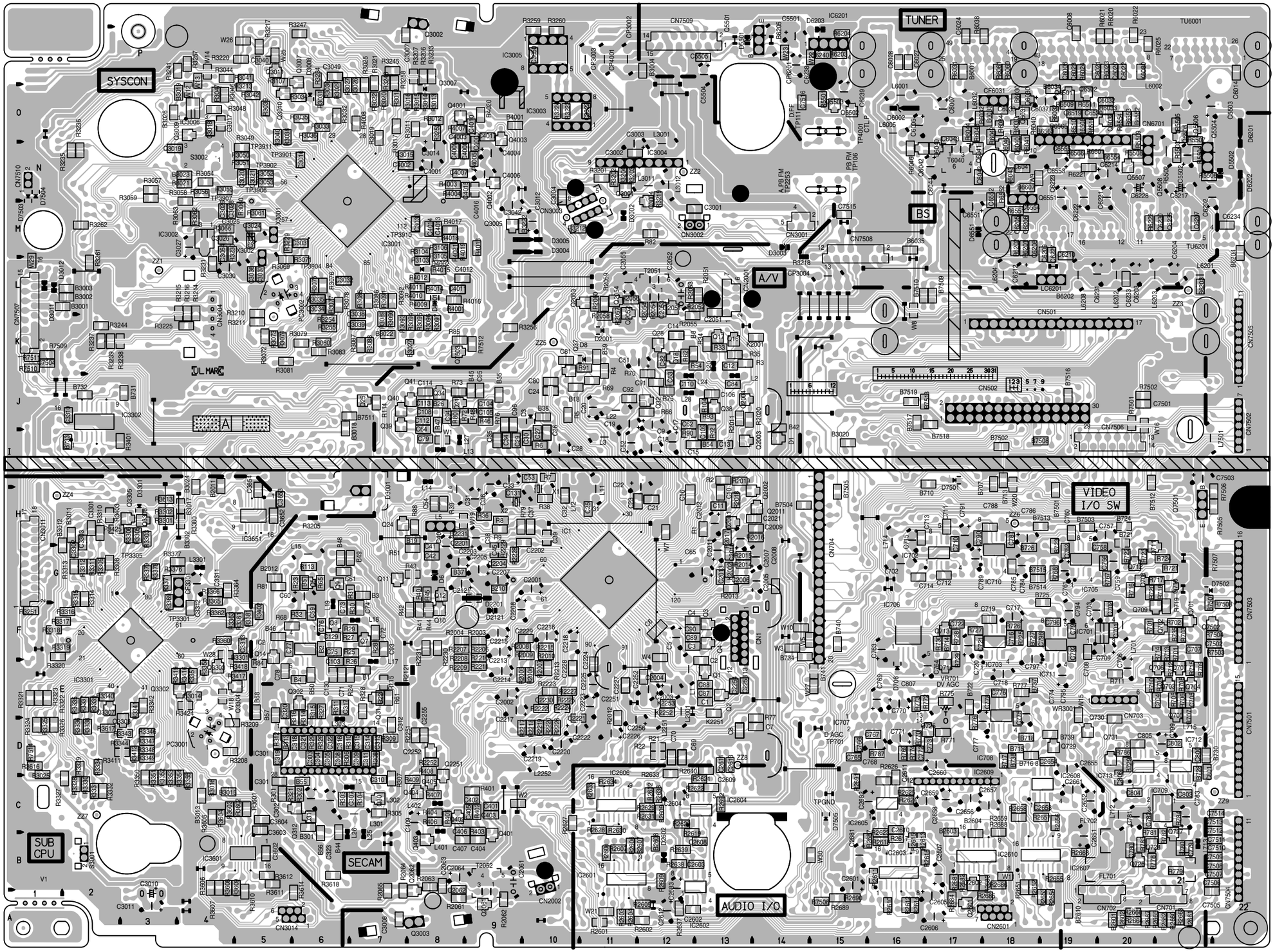


COPMONENT PARTS LOCATION GUIDE <S-SUB>

REF.NO.	LOCATION		
CAPACITOR			
C501	A	D	5D
C502	A	D	5D
C503	A	D	4D
C504	B	C	4E
C505	A	D	1D
C506	B	C	4E
C507	A	D	4E
C508	A	D	2E
C509	A	D	2D
C510	A	D	2C
C511	B	C	3C
C512	B	C	2D
C513	A	D	2D
C514	B	C	3C
C515	B	C	3B
C516	B	C	4B
C517	B	C	4B
C518	B	C	3C
C519	A	D	4B
C520	A	D	3C
C521	A	D	1D
C522	A	D	2B
C523	A	D	2B
C524	B	C	1C
C525	B	C	1C
C526	B	C	1C
C527	B	C	1B
C528	B	C	1B
C529	B	C	1B
C530	B	C	1A
C531	B	C	1A
C532	B	C	1B
C533	B	C	2A
C534	A	D	2A
C535	B	C	2D
C536	B	C	2D
C537	B	C	2D
C538	B	C	3B
C551	A	D	4B
C552	B	C	4B
C553	B	C	4B
C554	A	D	5B
C555	B	C	5C
C556	B	C	5B
C557	A	D	6C
C558	B	C	5C
C559	B	C	5C
C560	A	D	6D
C561	A	D	6D
C562	A	D	4E
C563	B	C	4D
C564	B	C	2D
C566	B	C	3B
C568	B	C	4B
C569	B	C	4B
C570	B	C	5B
C571	B	C	5C
C572	B	C	6C
C573	B	C	5C
C575	B	C	3D
C576	B	C	5D
CONNECTOR			
CN511	A	D	3A
CN512	A	D	5E
CN513	A	D	1E
IC			
IC501	B	C	4D
IC502	A	D	1C
COIL			
L501	A	D	2B
L502	A	D	5E
L503	A	D	3E
L504	A	D	2A
L505	A	D	3E
TRANSISTOR			
Q501	B	C	3B
RESISTOR			
R501	B	C	3C
R503	B	C	4E
R504	B	C	1C
R505	B	C	1C
R506	B	C	1C
R507	B	C	1C
R508	B	C	1C
R509	B	C	1C
R510	B	C	1B
R511	B	C	1B
R512	B	C	1B
R513	B	C	1A
R514	B	C	1A
R515	B	C	1B
R516	B	C	2D
R517	B	C	2D
R518	B	C	3B
R522	B	C	4B
R523	B	C	5C
R524	B	C	5C
R525	B	C	3B
R526	B	C	3B
R527	B	C	3D
R531	B	C	4B
R532	B	C	4B
R533	B	C	5B
R534	B	C	6C
R535	B	C	5C
R536	B	C	5C

4.29 MAIN CIRCUIT BOARD

<03> MAIN
LPB10113-001D



COMPONENT PARTS LOCATION GUIDE <MAIN>

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	13E
C2	B	C	13E
C3	B	C	12F
C4	B	C	12F
C5	A	D	12F
C6	B	C	12F
C7	B	C	14D
C8	B	C	13D
C9	A	D	12J
C10	B	C	13H
C11	B	C	13H
C12	B	C	13K
C13	B	C	13I
C14	B	C	12K
C15	B	C	12I
C16	B	C	12H
C17	A	D	12I
C18	A	D	12I
C19	A	D	11J
C20	A	D	11J
C21	B	C	12H
C22	A	D	11I
C23	B	C	12H
C24	B	C	10J
C25	B	C	11H
C26	B	C	10I
C27	B	C	10I
C28	A	D	10I
C29	B	C	9I
C30	B	C	10I
C31	A	D	9H
C32	B	C	10H
C33	A	D	9I
C34	B	C	9I
C35	B	C	9I
C36	A	D	9H
C37	B	C	10H
C38	A	D	9H
C39	B	C	10H
C40	A	D	8H
C41	B	C	8G
C42	B	C	8G
C45	B	C	9G
C51	A	D	12K
C52	A	D	11I
C53	B	C	10I
C54	B	C	8H
C59	B	C	6F
C60	A	D	6G
C61	B	C	6G
C62	B	C	12J
C63	B	C	12J
C64	B	C	8J
C65	A	D	13G
C69	B	C	12D
C70	B	C	12D
C71	B	C	6E
C72	B	C	7F
C73	B	C	6F
C74	B	C	7F
C75	B	C	6F
C76	B	C	6F
C77	B	C	5F
C78	B	C	5E
C79	B	C	8I
C80	B	C	10J
C81	B	C	10K
C82	B	C	12K
C84	B	C	13J
C87	B	C	13E
C88	B	C	13E
C89	B	C	12F
C90	B	C	12F
C91	B	C	12J
C92	B	C	11J
C93	B	C	7F
C94	B	C	8J
C95	B	C	9J
C96	B	C	9J
C103	B	C	6E
C104	B	C	9J
C105	B	C	9J
C106	B	C	13J
C108	B	C	8J
C109	B	C	13I
C110	B	C	12J
C112	B	C	8J
C113	B	C	8J
C114	B	C	8J
C129	B	C	6F
C130	B	C	6E
C131	B	C	9H
C301	B	C	5C
C302	A	D	6C
C303	B	C	6D
C304	B	C	6D
C305	B	C	6D
C307	B	C	7C
C308	B	C	6D
C309	B	C	7D
C310	B	C	7C
C311	B	C	7D
C312	B	C	7D
C313	B	C	7D
C314	B	C	7D
C315	B	C	7D
C316	B	C	6D
C317	B	C	6E
C318	B	C	6D
C319	B	C	5D
C320	B	C	5E
C321	B	C	6D
C322	B	C	6D
C323	A	D	6C
C401	B	C	9C
C402	B	C	9C
C403	B	C	9C
C404	B	C	9B
C405	B	C	9C
C406	B	C	8C
C407	B	C	8B
C409	A	D	8C
C701	B	C	20F
C702	B	C	20F
C703	A	D	19F
C704	B	C	21E
C705	B	C	21E
C706	A	D	20E
C707	B	C	21F
C708	B	C	19F
C709	A	D	20F
C710	B	C	17H
C711	B	C	17H

REF.NO.	LOCATION		
C712	B	C	17G
C713	B	C	16H
C714	B	C	16G
C715	A	D	16H
C716	B	C	18F
C717	A	D	18F
C718	A	D	18E
C719	B	C	18F
C720	A	D	17F
C721	B	C	17F
C722	B	C	17F
C756	B	C	20G
C757	A	D	20H
C758	B	C	20G
C759	A	D	20G
C760	B	C	19H
C761	A	D	19G
C762	B	C	19G
C763	A	D	16F
C764	A	D	17E
C765	B	C	15D
C766	B	C	15D
C767	B	C	16D
C768	A	D	16D
C769	A	D	16E
C770	A	D	16E
C771	A	D	16D
C772	B	C	16D
C773	B	C	17D
C774	A	D	18D
C775	B	C	18D
C776	B	C	18E
C777	A	D	18E
C778	B	C	18E
C779	B	C	21B
C780	B	C	20B
C781	A	D	20C
C782	B	C	20C
C783	A	D	21C
C784	A	D	18G
C785	B	C	18G
C786	A	D	18H
C787	B	C	18H
C788	B	C	18H
C789	A	D	17G
C790	B	C	17H
C791	A	D	17H
C792	B	C	19F
C793	B	C	19F
C794	A	D	19F
C795	A	D	19E
C796	B	C	19F
C797	A	D	18F
C798	B	C	19F
C799	A	D	21D
C800	B	C	21D
C801	B	C	21D
C802	B	C	21D
C803	B	C	21C
C804	B	C	20C
C805	B	C	20D
C806	B	C	20C
C807	A	D	16E
C2001	A	D	10G
C2002	A	D	9E
C2003	A	D	12E
C2004	B	C	12E
C2005	A	D	14G
C2006	B	C	13G
C2007	A	D	14G
C2008	A	D	13H
C2009	B	C	14H
C2010	B	C	13G
C2011	A	D	13G
C2012	A	D	13H
C2013	B	C	13G
C2021	B	C	14H
C2051	B	C	13L
C2052	A	D	12L
C2053	B	C	12L
C2054	B	C	12L
C2055	A	D	11L
C2061	A	D	9B
C2062	B	C	8B
C2063	B	C	8B
C2064	A	D	8B
C2121	A	D	9G
C2201	B	C	8H
C2202	B	C	10H
C2203	A	D	8G
C2204	B	C	9G
C2205	A	D	9G
C2207	A	D	9G
C2208	A	D	9F
C2213	A	D	9F
C2214	A	D	9E
C2215	A	D	9F
C2216	A	D	10F
C2217	A	D	9E
C2218	A	D	10F
C2219	A	D	10D
C2220	A	D	10D
C2221	B	C	10D
C2222	A	D	10D
C2223	A	D	11E
C2224	B	C	11E
C2225	A	D	11E
C2226	A	D	11D
C2227	B	C	11E
C2228	B	C	10E
C2229	B	C	10F
C2230	B	C	10E
C2231	B	C	8H
C2251	A	D	12E
C2252	B	C	12E
C2253	B	C	13E
C2254	B	C	13E
C2255	B	C	8D
C2256	A	D	12D
C2601	A	D	15B
C2602	B	C	12A
C2603	B	C	13B
C2604	A	D	12C
C2605	A	D	17A
C2606	A	D	17A
C2607	A	D	17B
C2608	B	C	13B
C2609	B	C	13C
C2610	B	C	16C
C2611	B	C	16C
C2612	A	D	12A
C2613	B	C	13D
C2614	B	C	13D
C2651	A	D	19B

REF.NO.	LOCATION		
C2652	A	D	19C
C2653	B	C	19C
C2654	B	C	19D
C2655	A	D	19D
C2656	A	D	18C
C2657	A	D	17C
C2658	A	D	17C
C2659	A	D	16C
C2660	A	D	17D
C2661	A	D	19C
C2681	A	D	15B
C2682	A	D	16C
C2683	A	D	12B
C3001	B	C	13M
C3002	B	C	11N
C3003	A	D	12N
C3004	B	C	10N
C3007	B	C	7P
C3008	B	C	7A
C3010	A	D	3A
C3011	A	D	3A
C3012	A	D	10M
C3014	A	D	8N
C3015	B	C	7N
C3016	B	C	6N
C3017	B	C	4O
C3018	B	C	4O
C3019	B	C	3N
C3020	B	C	5N
C3021	B	C	5N
C3022	B	C	11O
C3024	B	C	5M
C3025	A	D	5M
C3026	B	C	4M
C3027	A	D	4M
C3028	B	C	4M
C3029	B	C	4M
C3030	A	D	4L
C3031	B	C	6M
C3032	B	C	6L
C3033	B	C	8M
C3034	B	C	6L
C3035	B	C	6L
C3036	B	C	5L
C3037	B	C	5L
C3038	B	C	7L
C3039	B	C	7K
C3040	B	C	5P
C3041	B	C	5M
C3042	A	D	9M
C3049	B	C	6P
C3050	B	C	10P
C3054	B	C	4M
C3301	B	C	2H
C3302	B	C	2G
C3303	B	C	2H
C3310	B	C	2J
C3311	A	D	4G
C3312	B	C	4F
C3313	B	C	5F
C3602	B	C	5B
C3603	B	C	5C
C3604	B	C	5C
C3652	B	C	5H
C3653	B	C	5H
C3654	B	C	5H
C4001	A	D	8N
C4002	B	C	7N
C4003	B	C	8O
C4004	A	D	9N
C4005	B	C	9N
C4006	A	D	9N
C4007	B	C	8N
C4008	B	C	9N
C4009	B	C	8N
C4010	B	C	9O
C4011	B	C	8L
C4012	B	C	8L
C4013	B	C	8M
C4014	B	C	8M
C4015	B	C	9N
C4016	B	C	9N
C4017	B	C	9O
C5501	A	D	14P
C5502	A	D	21N
C5503	A	D	21O
C5504	A	D	13P
C5505	B	C	13P
C6005	A	D	16O
C6006	B	C	19P
C6007	A	D	17O
C6008	B	C	19P
C6014	B	C	22P
C6020	B	C	20P
C6021	B	C	19P
C6022	B	C	20P
C6023	B	C	19P
C6024	B	C	17P
C6027	B	C	16P
C6028	B	C	16P
C6032	B	C	20O
C6033	B	C	18O
C6037	A	D	19O
C6040	B	C	18N
C6041	B	C	18N
C6042	B	C	17N
C6043	B	C	17O
C6044	A	D	17N
C6202	A	D	22M
C6203	A	D	20L
C6204	A	D	21L
C6205	B	C	18M
C6206	B	C	18M
C6207	B	C	21M
C6208	B	C	18M
C6209	B	C	19M
C6210	B	C	19M
C6212	A	D	18L
C6214	A	D	20N
C6217	A	D	21N
C6221	A	D	20N
C6222	A	D	19M
C6223	A	D	19N
C6227	B	C	19M
C6228	A	D	20N
C6230	B	C	21M
C6231	A	D	20L
C6233	B	C	20L
C6234	B	C	22M
C6235	B	C	21M
C6238	A	D	14P
C6239	A	D	15O
C6240	B	C	15P
C6519	B	C	19O

REF.NO.	LOCATION		
C6520	B	C	19O
C6551	A	D	17M
C6552	B	C	18M
C6553	A	D	19N
C6554	B	C	18M
C6555	B	C	19N
C7501	B	C	20J
C7502	B	C	22F
C7503	A	D	21I
C7504	B	C	1K
C7505	B	C	21A
C7506	B	C	21B
C7507	B	C	22B
C7508	B	C	22B
C7509	B	C	22B
C7510	B	C	22B
C7511	B	C	22B
C7512	B	C	22C
C7513	B	C	22C
C7514	B	C	22C
C7515	B	C	15M
C7516	B	C	14O
CONNECTOR			
CN1	A	D	13F
CN501	A	D	17K
CN502	A	D	17J
CN701	A	D	20B
CN702	A	D	19B
CN703	A	D	19E
CN704	A	D	15I
CN2001	A	D	13L
CN2002	A	D	10B
CN2601	A	D	18A
CN3001	A	D	15M
CN3002	A	D	13M
CN3003	A	D	11M
CN3004	A	D	4L
CN3011	A	D	1G
CN3014	A	D	6A
CN6701	A	D	20O
CN7501	A	D	22C
CN7502	A	D	22I
CN7503	A	D	22F
CN7504	A	D	22A
CN7505	A	D	22J
CN7506	A	D	19I
CN7507	A	D	1K
CN7508	A	D	16L
CN7509	A	D	13P
CN7510	A	D	1N
DIODE			
D1	B	C	14I
D3	B	C	10J
D6	A	D	8G
D8	B	C	11K
D706	B	C	16E
D2001	B	C	11K
D2121	A	D	9F
D2201	A	D	8G
D2602	A	D	12B
D3001	A	D	7H
D3002	A	D	11M
D3003	A	D	14M
D3004	A	D	9M
D3005	A	D	9M
D3007	B	C	8O
D3008	B	C	6O
D3011	A	D	1L
D3012	A	D	1L
D3301	B	C	3H
D4001	B	C	8L
D4002	B	C	8L
D5501	A	D	13P
D5502	A	D	22N
D6002	A	D	16O
D6040	B	C	17N
D6201	A	D	22O
D6202	A	D	22M
D6203	A	D	15P
D6551	A	D	17M
D7501	B	C	17I
D7502	B	C	21G
D7503	B	C	1N
D7504	B	C	1N
D7505	B	C	15C
IC			
IC1	B	C	11G
IC2	B	C	6F
IC301	A	D	5D
IC701	B	C	20F
IC702	B	C	17G
IC703	B	C	18F
IC705	B	C	19G
IC706	B	C	16F
IC707	A	D	15E
IC708	B	C	18E
IC709	B	C	21C
IC710	B	C	18G
IC711	B	C	19F
IC712	B	C	21D
IC713	B	C	20D
IC2601	B	C	11B
IC2602	B	C	13B
IC2603	B	C	16B
IC2604	B	C	13C
IC2605	B	C	16C
IC2606	B	C	11C
IC2607	B	C	19B
IC2608	B	C	19C
IC2609	A	D	18C
IC2610	B	C	17B
IC3001	B	C	6M
IC3002	B	C	4M
IC3003	A	D	11O
IC3004	A	D	12N
IC3005	A	D	10P
IC3006	B	C	4O
IC3301	B	C	3F
IC3302	B	C	2J
IC3601	B	C	5B
IC3651	B	C	5H
IC6201	A	D	15P
COIL			
L1	A	D	12E
L2	A	D	13J
L3	A	D	11I
L4	A	D	8H
L5	A	D	8H
L11	A	D	11H
L12	A	D	11I
L13	A	D	8I
L14	A	D	8I

REF.NO.	LOCATION		
L15	A	D	6G
L17	A	D	7E
L18	A	D	7F
L19	A	D	6G
L20	A	D	13K
L22	A	D	11J
L24	A	D	12J
L25	A	D	7B
L26	A	D	6B
L27	A	D	8I
L28	A	D	13J
L301	A	D	6C
L302	A	D	7C
L303	A	D	7D
L401	A	D	8C
L402	A	D	8C
L701	A	D	20F
L702	A	D	16G
L712	A	D	20C
L713	A	D	21B
L714	A	D	16H
L715	A	D	21D
L2001	A	D	12D
L2251	A	D	12D
L2252	A	D	10D
L3001	A	D	12N
L3011	A	D	12N
L3012	A	D	12N
L3301	A	D	4G
L6001	A	D	16O
L6002	A	D	21O
L6005	A	D	16O
L6032	A	D	17O
L6201	A	D	21L
L6202	A	D	20L
L6203	A	D	21L
L6204	A	D	18L
L6208	A	D	19L
L7501	A	D	21I
TRANSISTOR			
Q1	B	C	13E
Q2	B	C	13E
Q3	B	C	13F
Q4	B	C	13F
Q5	B	C	6G
Q7	B	C	7F
Q8	B	C	6F
Q9	B	C	6G
Q10	B	C	8F
Q11	B	C	7G
Q12	B	C	8G
Q14	B	C	5F
Q16	B	C	13K
Q17	B	C	13K
Q18	B	C	12K
Q21	B	C	8J
Q24	B	C	7H
Q25	B	C	7J
Q28	B	C	12K
Q31	B	C	7E
Q32	B	C	12J
Q34	B	C	8J
Q37	B	C	10K
Q38	B	C	13J
Q39	B	C	7J
Q40	B	C	7J
Q41	B	C	8J
Q301	B	C	7C
Q302	B	C	6E
Q311	B	C	6C
Q312	B	C	6C
Q401	B	C	9B
Q402	B	C	8C
Q403	B	C	8B
Q404	B	C	8C
Q405	B	C	8C
Q701	B	C	21F
Q702	B	C	21F
Q703	B	C	21E
Q704	B	C	21E
Q705	B	C	21E
Q706	B	C	21E
Q707	B	C	21E
Q708	B	C	20G
Q709	B	C	21F
Q710	B	C	21G
Q711	B	C	21G
Q712	B	C	20G
Q713	B	C	17F
Q714	B	C	17E
Q725	B	C	17D
Q726	B	C	20B
Q727	B	C	21B
Q728	B	C	20B
Q729	B	C	19D
Q730	B	C	19D
Q731	B	C	20D
Q2001	B	C	13H
Q2002	B	C	14H
Q2003	B	C	13I
Q2004	B	C	13J
Q2011	B	C	14H
Q2051	B	C	12L
Q2052	B	C	11L
Q2053	B	C	11L
Q2054	B	C	11L
Q2061	B	C	9A
Q2062	B	C	8A
Q2251	B	C	8C
Q2252	B	C	8D
Q2601	B	C	17A
Q2602	B	C	17B
Q3001	B	C	11N
Q3002	A	D	8P
Q3003	A	D	8A
Q3004	B	C	12M
Q3005	B	C	9M
Q3007	B	C	6P
Q3009	B	C	4O
Q3010	B	C	5O
Q3011	B	C	5P
Q3302	B	C	4E
Q3303	B	C	4E
Q3304	B	C	5E
Q3305	B	C	3H
Q3306	B	C	3H
Q3307	B	C	2E
Q3308	B	C	3D
Q4001	B	C	8O
Q4002	B	C	9N
Q4003	B	C	9O
Q5501	A	D	14P
Q5502	B	C	15O
Q5503	B	C	15O

REF.NO.	LOCATION		
Q5504	A	D	21N
Q5505	B	C	21O
Q5506	B	C	21O
Q5507	B	C	20N
Q5508	A	D	20O
Q6030	B	C	18O
Q6031	B	C	18O
Q6032	B	C	20O
Q6040	B	C	18N
Q6041	B	C	17N
Q6042	B	C	16N
Q6501	B	C	19O
Q6502	B	C	19O
Q6551	A	D	18N
Q7501	A	D	21H
Q7502	B	C	22F
Q7503	B	C	8K
RESISTOR			
R1	B	C	13H
R2	B	C	13I
R3	B	C	13K
R4	B	C	11K
R5	B	C	10J
R6	B	C	10I
R7	B	C	10I
R8	B	C	9H
R9	B	C	9H
R21	B	C	12D
R22	B	C	12D
R23	B	C	6G
R24	B	C	7E
R25	B	C	7F
R26	B	C	7E
R27	B	C	7F
R28	B	C	7F
R29	B	C	7F
R30	B	C	7F
R31	B	C	7G
R32	B	C	6F
R33	B	C	13K
R34	B	C	13K
R35	B	C	13K
R36	B	C	9H
R38	B	C	10H
R39	B	C	8H
R40	B	C	8G
R41	B	C	8F
R42	B	C	8F
R43	B	C	8G
R44	B	C	8F
R45	B	C	8G
R46	B	C	9J
R47	B	C	8J
R48	B	C	9J
R51	B	C	8G
R54	B	C	13K
R61	B	C	7E
R62	B	C	12K
R65	B	C	6G
R66	B	C	12J
R68	B	C	6F
R69	B	C	11J
R70	B	C	12J
R72	B	C	8J
R73	B	C	8J
R75	B	C	12J
R76	B	C	9J
R77	B	C	14D
R79	B	C	9H
R80	B	C	8J
R81	B	C	5G
R82	B	C	12M
R84	B	C	5E
R85	B	C	8K
R88	B	C	8H
R90	B	C	12I
R91	B	C	11K
R92	B	C	13I
R93	B	C	13J
R104	B	C	13J
R113	B	C	6G
R114	B	C	7J
R115	B	C	7E
R301	B	C	5C
R302	B	C	6C
R303	B	C	6C
R304	B	C	7C
R305	B	C	7C
R306	B	C	6D
R307	B	C	7C
R308	B	C	7D
R309	B	C	7D
R310	B	C	6D
R311	B	C	6E
R312	B	C	5D
R313	B	C	5D
R314	B	C	6D
R315	B	C	6E
R316	B	C	6D
R321	B	C	5C
R326	B	C	6D
R327	B	C	6E
R328	B	C	7E
R329	B	C	6D
R401	B	C	9C
R402	B	C	9C
R403	B	C	9C
R404	B	C	8C
R405	B	C	8C
R406	B	C	8C
R407	B	C	8C
R408	B	C	8D
R409	B	C	8C
R701	B	C	20F
R702	B	C	21F
R703	B	C	21F
R704	B	C	21E
R705	B	C	21E
R706	B	C	21E
R707	B	C	21E
R708	B	C	21E
R709	B	C	21E
R710	B	C	20E
R711	B	C	20E
R712	B	C	21E
R713	B	C	21F
R714	B	C	21F
R715	B	C	21E
R716	B	C	20G
R717	B	C	21G
R718	B	C	21G
R719	B	C	21F
R720	B	C	20G
R721	B	C	21G

REF.NO.	LOCATION		
R722	B	C	20G
R723	B	C	20G
R724	B	C	21G
R725	B	C	18F
R726	B	C	18F
R727	B	C	17F
R728	B	C	17F
R729	B	C	17F
R730	B	C	17F
R767	B	C	20G
R768	B	C	19G
R769	B	C	16D
R770	B	C	16D
R771	B	C	17D
R772	B	C	17E
R773	B	C	16E
R774	B	C	16D
R775	B	C	17E
R776	B	C	17D
R777	B	C	18E
R778	B	C	20B
R779	B	C	21B
R780	B	C	21B
R781	B	C	20B
R782	B	C	21B
R783	B	C	20B
R784	B	C	21C
R785	B	C	20D
R786	B	C	20D
R787	B	C	16D
R2003	B	C	9F
R2004	B	C	8F
R2005	B	C	9E
R2006	B	C	10E
R2007	B	C	10E
R2008	B	C	10F
R2009	B	C	10F
R2010	B	C	10F
R2011	B	C	13J
R2012	B	C	11D
R2013	B	C	13G
R2014	B	C	13G
R2015	B	C	13G
R2016	B	C	14H
R2017	B	C	13H
R2018	B	C	13H
R2019	B	C	13I
R2020	B	C	13J
R2051	B	C	13L
R2052	B	C	13L
R2053	B	C	12L
R2054	B	C	12L
R2055	B	C	12K
R2056	B	C	11L
R2057	B	C	11K
R2058	B	C	11K
R2059	B	C	11L
R2060	B	C	11L
R2061	B	C	8A
R2062	B	C	9A
R2063	B	C	8B
R2064	B	C	7A
R2065	B	C	7A
R2121	A	D	8E
R2206	B	C	9F
R2207	B	C	8F
R2208	B	C	8F
R2209	B	C	8E
R2210	B	C	9F
R2211	B	C	9E
R2213	B	C	10E
R2215	B	C	10F
R2217	B	C	10D
R2218	B	C	10D
R2219	B	C	10D
R2220	B	C	10D
R2222	B	C	10E
R2223	B	C	10E
R2224	B	C	10E
R2225	B	C	10E
R2226	B	C	10D
R2227	B	C	10E
R2228	B	C	9G
R2229	B	C	9G
R2230	B	C	8F
R2231	B	C	8F
R2251	B	C	8D
R2252	B	C	8D
R2601	B	C	11A
R2602	B	C	12A
R2603	B	C	11A
R2604	B	C	11A
R2605	B	C	12A
R2606	B	C	11B
R2607	B	C	11B
R2608	B	C	11B
R2609	B	C	12B
R2610	B	C	16A
R2611	B	C	16B
R2612	B	C	16A
R2613	B	C	16B
R2614	B	C	16A
R2615	B	C	16B
R2616	B	C	17B
R2617	B	C	16B
R2618	B	C	16B
R2619	B	C	12B
R2620	B	C	12C
R2621	B	C	13C
R2622	B	C	13C
R2623	B	C	16B
R2624	B	C	16C
R2625	B	C	16C
R2626	B	C	16C
R2627	B	C	10C
R2628	B	C	11C
R2629	B	C	12C
R2630	B	C	11C
R2631	B	C	12C
R2632	B	C	12C
R2633	B	C	12D
R2634	B	C	11C
R2635	B	C	11C
R2636	B	C	12C
R2637	B	C	12A
R2638	B	C	12B
R2639	B	C	12B
R2640	B	C	13D
R2651	B	C	18B
R2652	B	C	18B
R2653	B	C	19A
R2654	B	C	19A
R2655	B	C	19B
R2656	B	C	19C

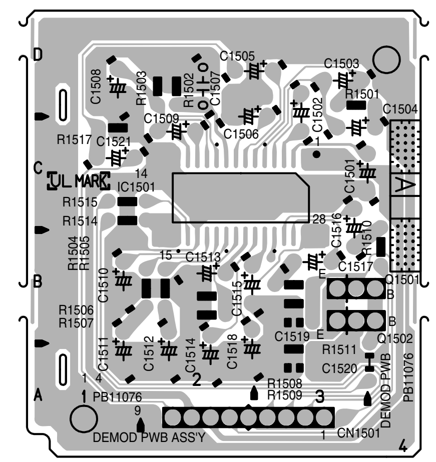
REF.NO.	LOCATION		
R2657	B	C	19C
R2658	B	C	18C
R2659	B	C	18C
R2660	B	C	21A
R2661	B	C	21A
R2662	B	C	21A
R2663	B	C	21A
R2664	B	C	20A
R2665	B	C	20A
R2666	B	C	20A
R2667	B	C	20A
R2668	B	C	19B
R2681	B	C	17B
R2682	B	C	17B
R2683	B	C	18B
R2684	B	C	17A
R2685	B	C	18A
R2686	B	C	18B
R2687	B	C	16B
R2688	B	C	18C
R2689	B	C	15A
R2690	B	C	15A
R2691	B	C	15C
R2692	B	C	13C
R3011	B	C	8O
R3012	B	C	8O
R3013	B	C	8O
R3014	B	C	8O
R3015	B	C	8O
R3016	B	C	8O
R3017	B	C	7O
R3018	B	C	7O
R3019	B	C	7O
R3020	B	C	7O
R3021	B	C	7P
R3022	B	C	7O
R3025	B	C	7O
R3026	B	C	7O
R3027	B	C	6O
R3029	B	C	6O
R3030	B	C	6O
R3031	B	C	6O
R3032	B	C	6O
R3033	B	C	6O
R3034	B	C	6O
R3035	B	C	6O
R3036	B	C	6O
R3038	B	C	5O
R3039	B	C	5O
R3040	B	C	5O
R3041	B	C	5P
R3042	B	C	5O
R3044	B	C	4P
R3046	B	C	4O
R3047	B	C	4O
R3048	B	C	4O
R3049	B	C	5N
R3050	B	C	5N
R3051	B	C	5N
R3052	B	C	5N
R3053	B	C	5N
R3054	B	C	4N
R3055	B	C	4N
R3056	B	C	4N
R3057	B	C	3N
R3058	B	C	4M
R3059	B	C	3N
R3060	B	C	5M
R3061	B	C	5M
R3062	B	C	4M
R3063	B	C	4M
R3066	B	C	4M
R3069	B	C	5L
R3071	B	C	6L
R3072	B	C	5K
R3073	B	C	5K
R3074	B	C	5K
R3075	B	C	6L
R3076	B	C	6L
R3077	B	C	6L
R3078	B	C	6L
R3079	B	C	6K
R3080	B	C	6K
R3081	B	C	5K
R3083	B	C	6K
R3085	B	C	7L
R3086	B	C	7L
R3087	B	C	7K
R3088	B	C	7K
R3089	B	C	7K
R3090	B	C	7K
R3091	B	C	7L
R3092	B	C	7L
R3093	B	C	7K
R3094	B	C	8K
R3095	B	C	8K
R3096	B	C	8K
R3097	B	C	8K
R3103	B	C	8L
R3104	B	C	8M
R3105	B	C	8M
R3106	B	C	8M
R3107	B	C	5P
R3201	B	C	11N
R3202	B	C	11N
R3203	B	C	11N
R3204	B	C	11N
R3205	A	D	6H
R3206	B	C	8P
R3207	B	C	8P
R3208	B	C	4D
R3209	B	C	4D
R3210	B	C	5L
R3211	B	C	5K
R3212	B	C	10M
R3213	B	C	5O
R3214	B	C	4L
R3215	B	C	4L
R3216	B	C	4L
R3217	B	C	5P
R3218	A	D	14M
R3219	B	C	12N
R3220	B	C	5P
R3222	B	C	10M
R3223	B	C	10O
R3224	B	C	10O
R3225	B	C	4K
R3229	B	C	5M
R3230	B	C	4M
R3231	B	C	4L
R3233	B	C	8P
R3234	B	C	6P
R3235	B	C	2N
R3236	B	C	2N

REF.NO.	LOCATION		
R3237	B	C	2K
R3238	B	C	3K
R3239	B	C	2K
R3241	B	C	4P
R3244	B	C	2K
R3245	B	C	7P
R3246	B	C	7P
R3247	B	C	6P
R3251	B	C	1F
R3252	B	C	8O
R3254	B	C	6K
R3255	B	C	6K
R3256	B	C	9K
R3257	B	C	4P
R3258	B	C	7P
R3259	B	C	10P
R3260	B	C	10P
R3261	B	C	2L
R3262	B	C	2M
R3301	B	C	3H
R3302	B	C	3H
R3303	B	C	3H
R3305	B	C	3H
R3306	B	C	3H
R3308	B	C	2G
R3309	B	C	2G
R3310	B	C	2H
R3311	B	C	2G
R3312	B	C	2G
R3313	B	C	2G
R3314	B	C	2G
R3315	B	C	2G
R3316	B	C	2F
R3317	B	C	2F
R3318	B	C	1F
R3319	B	C	2F
R3320	B	C	1F
R3321	B	C	1E
R3322	B	C	1E
R3323	B	C	1E
R3324	B	C	1D
R3325	B	C	1D
R3326	B	C	1D
R3327	B	C	2C
R3328	B	C	2C
R3329	B	C	2D
R3330	B	C	2C
R3331	B	C	2C
R3332	B	C	2C
R3334	B	C	2D
R3335	B	C	2E
R3336	B	C	2D
R3337	B	C	2E
R3338	B	C	2D
R3339	B	C	2E
R3340	B	C	2E
R3341	B	C	3E
R3342	B	C	3E
R3343	B	C	3D
R3344	B	C	3D
R3346	B	C	3D
R3347	B	C	3D
R3348	B	C	3D
R3349	B	C	3D
R3350	B	C	3C
R3351	B	C	3C
R3352	B	C	3C
R3353	B	C	3C
R3354	B	C	4C
R3355	B	C	4C
R3357	B	C	4E
R3358	B	C	4E
R3360	B	C	4F
R3361	B	C	5F
R3362	B	C	4F
R3363	B	C	4F
R3364	B	C	4G
R3365	B	C	4G
R3366	B	C	4G
R3369	B	C	3G
R3371	B	C	3G
R3376	B	C	4G
R3377	B	C	4G
R3378	B	C	3G
R3379	B	C	3G
R3380	B	C	4H
R3381	B	C	5F
R3401	B	C	3I
R3402	B	C	5F
R3403	B	C	2H
R3411	B	C	3D
R3412	B	C	3D
R3416	B	C	4E
R3417	B	C	5E
R3418	B	C	5E
R3419	B	C	3E
R3424	B	C	4E
R3425	B	C	2H
R3601	B	C	5C
R3602	B	C	5C
R3603	B	C	4C
R3604	B	C	4C
R3605	B	C	4C
R3606	B	C	4B
R3607	B	C	4B
R3608	B	C	4B
R3609	B	C	5B
R3610	B	C	5A
R3611	B	C	5B
R3612	B	C	5B
R3613	B	C	3H
R3614	B	C	6A
R3616	B	C	1D
R3617	B	C	2D
R3618	B	C	6B
R4001	B	C	8L
R4003	B	C	8N
R4004	B	C	8N
R4005	B	C	9N
R4007	B	C	8O
R4008	B	C	7O
R4009	B	C	8L
R4010	B	C	8L
R4011	B	C	8L
R4012	B	C	8L
R4013	B	C	9M
R4014	B	C	8L
R4015	B	C	8L
R4016	B	C	8L
R4017	B	C	8M
R4018	B	C	8M
R4019	B	C	8M
R4020	B	C	9O
R4021	B	C	8M

REF.NO.	LOCATION		
R5501	B	C	15O
R5502	A	D	21N
R5503	B	C	21N
R5504	B	C	21N
R5505	B	C	21O
R5506	B	C	21N
R5507	B	C	21O
R5508	B	C	20N
R5509	B	C	20O
R6020	B	C	20P
R6021	B	C	20P
R6022	B	C	20P
R6023	B	C	20P
R6024	B	C	19P
R6025	B	C	20P
R6030	B	C	18O
R6031	B	C	17P
R6032	B	C	19O
R6033	B	C	20O
R6034	B	C	18O
R6038	B	C	18P
R6040	B	C	18O
R6041	B	C	18N
R6042	B	C	18O
R6043	B	C	18N
R6044	B	C	17O
R6045	B	C	17O
R6046	B	C	16N
R6060	B	C	18P
R6061	B	C	18P
R6201	B	C	18M
R6202	B	C	18M
R6203	B	C	15P
R6204	B	C	15P
R6221	B	C	19N
R6222	B	C	20M
R6508	B	C	19O
R6509	B	C	19O
R6510	B	C	19O
R6511	B	C	19O
R6551	B	C	18M
R6552	B	C	18M
R6553	B	C	20O
R6554	B	C	20O
R6601	B	C	19N
R7501	B	C	20J
R7502	B	C	20J
R7503	B	C	22F
R7504	B	C	22F
R7505	B	C	22H
R7506	B	C	22H
R7507	A	D	21H
R7508	B	C	22F
R7509	B	C	1K
R7510	B	C	1K
R7511	B	C	1K
R7512	B	C	9K
R7513	B	C	17J
R7514	B	C	1D
SWITCH			
S3001	A	D	2B
S3002	A	D	4N
TEST POINT			
TP106	A	D	15N
TP111	A	D	15O
TP701	A	D	15D
TP2253	A	D	15N
TP3301	B	C	3G
TP3302	B	C	4G
TP3303	B	C	5F
TP3304	B	C	3H
TP3305	B	C	2G
TP3306	B	C	4G
TP3901	B	C	5N
TP3902	B	C	5N
TP3903	B	C	4M
TP3904	B	C	6M
TP3905	B	C	5M
TP3906	B	C	5N
TP3907	B	C	5N
TP3908	B	C	5N
TP3910	B	C	8M
TP3911	B	C	6O
TP4001	A	D	15O
TPGND	A	D	15C
OTHER			
CF3301	A	D	4G
CF6031	A	D	18O
CP3002	A	D	11P
CP3003	A	D	11P
CP3004	A	D	15L
CP4001	A	D	11P
CP6201	A	D	14P
FL701	A	D	21B
FL702	A	D	20B
K2001	B	C	14K
K2002	B	C	13G
K2251	B	C	13E
K2252	B	C	12E
K2253	B	C	12E
K6080	B	C	20P
LC6201	A	D	19L
PC3001	A	D	4D
PC3002	A	D	5L
T2051	A	D	12L
T2052	A	D	9A
T6040	A	D	17N
TU6201	A	D	22M
VR701	A	D	17E
WR3001	A	D	18D
X1	A	D	10H
X2	A	D	10H
X3001	A	D	5M
X3002	A	D	5L

4.30 DEMODULATOR AND ON SCREEN CIRCUIT BOARDS

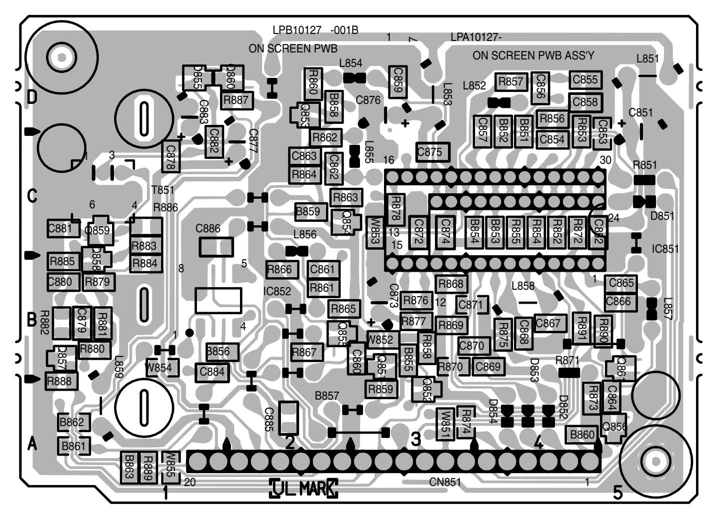
<14> DEMODULATOR
PB11076



COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

REF.NO.	LOCATION			REF.NO.	LOCATION			REF.NO.	LOCATION		
CAPACITOR				C1520	A	D	3A	R1509	A	D	3B
C1501	A	D	4C	C1521	A	D	2C	R1510	A	D	4B
C1502	A	D	3D	**CONNECTOR**				R1511	A	D	3A
C1503	A	D	4D	CN1501	A	D	3A	R1514	A	D	2B
C1504	A	D	4C	**IC**				R1515	A	D	2C
C1505	A	D	3D	IC1501	B	C	2C	R1517	A	D	2C
C1506	A	D	3C	**TRANSISTOR**							
C1507	A	D	2C	Q1501	A	D	3B				
C1508	A	D	1D	Q1502	A	D	3B				
C1509	A	D	2C	**RESISTOR**							
C1510	A	D	1B	R1501	A	D	4C				
C1511	A	D	1A	R1502	A	D	2C				
C1512	A	D	2A	R1503	A	D	2C				
C1513	A	D	2B	R1504	A	D	2B				
C1514	A	D	2A	R1505	A	D	2B				
C1515	A	D	3B	R1506	A	D	2B				
C1516	A	D	3C	R1507	A	D	2B				
C1517	A	D	3B	R1508	A	D	3B				
C1518	A	D	3A								
C1519	A	D	3B								

<17>ON SCREEN
LPB10127-001B



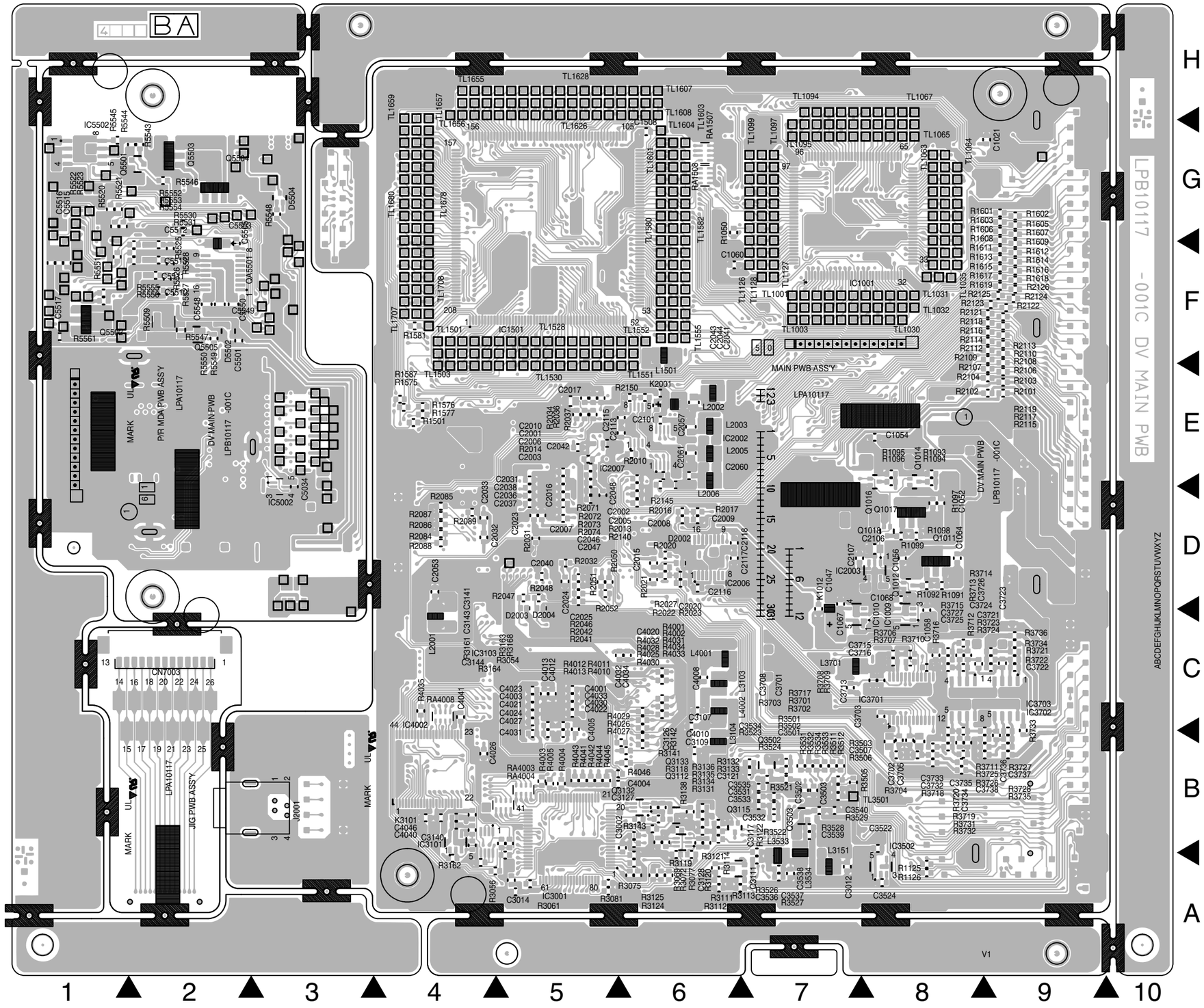
COMPONENT PARTS LOCATION GUIDE <ON SCREEN>

REF.NO.	LOCATION			REF.NO.	LOCATION			REF.NO.	LOCATION			REF.NO.	LOCATION		
CAPACITOR				**CONNECTOR**				**RESISTOR**				R886	B	C	1C
C851	A	D	5D	CN851	A	D	4A	R851	A	D	5C	R887	B	C	2D
C852	B	C	5C	**DIODE**				R852	B	C	4C	R888	B	C	1A
C853	B	C	5C	D851	A	D	5C	R853	B	C	4D	R889	B	C	1A
C854	B	C	4C	D852	A	D	4A	R854	B	C	4C	R890	B	C	5B
C855	B	C	4D	D853	A	D	4A	R855	B	C	4C	R891	B	C	4B
C856	B	C	4D	D854	A	D	4A	R856	B	C	4D	**OTHER**			
C857	B	C	4D	D855	B	C	1D	R857	B	C	4D	PC0219	B	C	4B
C858	B	C	4D	**IC**				R858	B	C	3B	PC0223	B	C	5B
C859	B	C	3D	IC851	A	D	5B	R859	B	C	3A	T851	A	D	1C
C860	B	C	3B	IC852	B	C	1B	R860	B	C	2D				
C861	B	C	2B	**COIL**				R861	B	C	2B				
C862	B	C	2C	L851	A	D	5D	R862	B	C	2C				
C863	B	C	2C	L852	A	D	4D	R863	B	C	2C				
C864	B	C	5A	L853	A	D	3D	R864	B	C	2C				
C865	B	C	5B	L854	A	D	3D	R865	B	C	2B				
C866	B	C	5B	L855	A	D	3C	R866	B	C	2B				
C867	B	C	4B	L856	A	D	2C	R867	B	C	2B				
C868	B	C	4B	L857	A	D	5B	R868	B	C	3B				
C869	B	C	4B	L858	A	D	4B	R869	B	C	3B				
C870	B	C	4B	L859	A	D	1A	R870	B	C	3B				
C871	B	C	3B	**TRANSISTOR**				R871	A	D	4B				
C872	B	C	3C	Q851	B	C	3B	R872	B	C	4C				
C873	A	D	3B	Q852	B	C	3A	R873	B	C	4A				
C874	B	C	3C	Q853	B	C	2D	R874	B	C	3A				
C875	B	C	3C	Q854	B	C	2C	R875	B	C	4B				
C876	A	D	3D	Q855	B	C	2B	R876	B	C	3B				
C877	A	D	2C	Q856	B	C	5A	R877	B	C	3B				
C878	B	C	1C	Q857	B	C	1B	R878	B	C	3C				
C879	B	C	1B	Q858	B	C	1B	R879	B	C	1B				
C880	B	C	1B	Q859	B	C	1C	R880	B	C	1B				
C881	B	C	1C	Q860	B	C	2D	R881	B	C	1B				
C882	B	C	1C	Q861	B	C	5B	R882	B	C	1B				
C883	A	D	1D					R883	B	C	1C				
C884	B	C	1B					R884	B	C	1B				
C885	B	C	2A					R885	B	C	1B				
C886	B	C	1C												

4.31 PR/MDA, DV MAIN CIRCUIT BOARDS

<16> P/R MDA, <50> DV MAIN
LPB10117-001C

— FOIL SIDE(B) —



COMPONENT PARTS LOCATION GUIDE <DV MAIN>

REF.NO.	LOCATION
CAPACITOR	
C1001	A C 7H
C1002	A C 8H
C1003	A C 8H
C1004	A C 8H
C1006	A C 8I
C1007	A C 8I
C1008	A C 7I
C1010	A C 7I
C1011	A C 7I
C1021	B C 9J
C1041	A C 9H
C1042	A C 7I
C1043	A C 7I
C1044	A C 7H
C1045	A C 8H
C1047	B C 7E
C1048	A C 8D
C1049	A C 8D
C1050	A C 7D
C1051	A C 8F
C1052	B C 8F
C1053	A C 8F
C1054	B C 8F
C1055	A C 8E
C1056	B C 8E
C1057	A C 8D
C1058	B C 8D
C1059	A C 6H
C1060	B C 6H
C1061	A C 7F
C1062	A C 8F
C1063	A C 8E
C1064	B C 8E
C1067	B C 7E
C1068	B C 8E
C1069	A C 7E
C1070	A C 8E
C1071	A C 6J
C1072	A C 6J
C1073	A C 6J
C1074	A C 6J
C1075	A C 6J
C1501	A C 5H
C1502	A C 5H
C1503	A C 5H
C1504	A C 5H
C1505	A C 5I
C1506	A C 5J
C1507	A C 5J
C1508	B C 5J
C1509	A C 5G
C1510	A C 5G
C1515	A C 4I
C1516	A C 4I
C1517	A C 3I
C1518	A C 3I
C1521	A C 3H
C1522	A C 3J
C1523	A C 4J
C2001	B C 4F
C2002	B C 5F
C2003	B C 4F
C2005	B C 5F
C2006	B C 4F
C2007	B C 4E
C2008	B C 5E
C2009	B C 6E
C2010	B C 4F
C2011	A C 5F
C2014	A C 5E
C2015	B C 5E
C2016	B C 4F
C2017	B C 4G
C2018	A C 4G
C2019	A C 5G
C2020	B C 5E
C2022	A C 4E
C2023	B C 4F
C2024	B C 4E
C2025	B C 4E
C2026	A C 4D
C2027	A C 4E
C2028	A C 4D
C2029	A C 4E
C2031	B C 4F
C2032	B C 3E
C2033	B C 3E
C2036	B C 4F
C2037	B C 4F
C2038	B C 4F
C2039	B C 5F
C2040	B C 4E

REF.NO.	LOCATION
C2041	B C 5G
C2042	B C 4F
C2043	B C 4G
C2044	B C 5G
C2046	B C 4F
C2047	B C 4F
C2048	B C 5F
C2051	A C 6G
C2052	B C 6G
C2053	B C 3E
C2054	A C 3E
C2055	A C 6E
C2056	A C 6E
C2057	B C 6F
C2058	A C 6G
C2059	A C 6F
C2060	B C 6F
C2061	B C 6F
C2062	A C 6F
C2101	B C 5G
C2102	A C 5F
C2103	A C 5F
C2104	A C 5F
C2105	B C 5G
C2106	B C 8E
C2107	B C 7E
C2108	A C 7E
C2109	A C 7F
C2110	A C 8F
C2111	A C 5G
C2112	A C 5G
C2113	B C 5F
C2114	B C 5G
C2115	B C 5G
C2116	B C 6E
C2117	B C 6E
C2118	B C 6E
C2119	B C 5F
C3001	B C 5B
C3002	B C 5B
C3003	A C 4B
C3004	A C 5B
C3005	A C 5B
C3006	A C 5B
C3007	A C 5B
C3008	A C 5B
C3009	A C 5B
C3010	A C 4B
C3011	A C 7B
C3012	B C 7B
C3013	A C 4B
C3014	B C 4A
C3015	A C 4B
C3016	A C 4B
C3017	A C 4B
C3101	A C 5B
C3102	A C 5B
C3103	A C 5B
C3106	A C 6D
C3107	B C 6C
C3108	A C 6C
C3109	B C 6C
C3111	B C 6A
C3112	A C 6B
C3113	A C 6B
C3114	A C 6B
C3115	A C 6B
C3116	A C 6B
C3117	B C 6B
C3118	A C 5B
C3119	A C 5B
C3121	B C 6B
C3122	A C 6B
C3123	A C 6B
C3124	A C 6B
C3125	A C 5B
C3126	B C 5B
C3127	B C 5B
C3128	B C 5B
C3131	A C 7B
C3132	A C 7B
C3140	B C 3B
C3141	B C 3B
C3142	A C 3B
C3143	B C 3B
C3144	B C 3B
C3501	B C 7C
C3502	B C 7C
C3503	B C 7C
C3504	A C 7C
C3505	A C 7C
C3506	A C 7C
C3507	B C 7C

REF.NO.	LOCATION
C3508	A C 7B
C3509	A C 7B
C3510	A C 7B
C3511	A C 7B
C3512	A C 7B
C3513	A C 7B
C3514	A C 7B
C3515	A C 7C
C3520	A C 8B
C3521	A C 8B
C3522	B C 8B
C3523	A C 8B
C3524	B C 8B
C3525	A C 8B
C3531	B C 6B
C3532	B C 6B
C3533	B C 6B
C3534	B C 6C
C3535	B C 6C
C3536	B C 6B
C3537	B C 7B
C3538	B C 7B
C3539	B C 7B
C3540	B C 7B
C3701	B C 8C
C3702	B C 8C
C3703	B C 8C
C3704	A C 8C
C3705	B C 8C
C3706	A C 8C
C3707	A C 8C
C3708	B C 8C
C3709	A C 8C
C3710	A C 8D
C3711	A C 8D
C3712	A C 7D
C3713	B C 7D
C3714	A C 8D
C3715	B C 8D
C3716	B C 8D
C3717	A C 8D
C3718	A C 8D
C3721	B C 9D
C3722	B C 9D
C3723	B C 9D
C3724	B C 9D
C3725	B C 8D
C3726	B C 9D
C3727	B C 8D
C3728	A C 9D
C3729	A C 9C
C3730	A C 9C
C3731	A C 9D
C3732	B C 8C
C3733	B C 8C
C3734	B C 9C
C3735	B C 9C
C3736	B C 9C
C3737	B C 9C
C3738	B C 9C
C4001	B C 4D
C4002	A C 3D
C4003	B C 4D
C4004	B C 5C
C4005	B C 4C
C4007	A C 6D
C4008	B C 6D
C4009	A C 6C
C4010	B C 6C
C4011	A C 4D
C4012	B C 4D
C4013	B C 4D
C4015	A C 4D
C4016	A C 4D
C4017	A C 6D
C4018	A C 6D
C4020	B C 5C
C4021	B C 4C
C4022	B C 4C
C4023	B C 4D
C4024	B C 4C
C4025	A C 3D
C4026	B C 3C
C4027	B C 4C
C4030	B C 4C
C4031	B C 4C
C4032	B C 5D
C4033	B C 4D
C4034	B C 5D
C4040	B C 3B
C4041	B C 3C
C4042	A C 3C
C4045	A C 3B

REF.NO.	LOCATION
C4046	B C 3B
C5053	A C 2E
CONNECTOR	
CN1001	A C 10E
CN1002	A C 10I
CN1101	A C 9C
CN1501	A C 10H
CN1502	A C 2I
CN2001	A C 10G
CN3501	A C 10B
CN3701	A C 10C
DIODE	
D1001	A C 7H
D1002	A C 9I
D1003	A C 8H
D1501	A C 3H
D2002	B C 5E
D2003	B C 4E
D2004	B C 4E
IC	
IC1001	B C 7I
IC1002	A C 9J
IC1003	A C 6I
IC1004	A C 6I
IC1005	A C 8H
IC1006	A C 8I
IC1007	A C 8I
IC1008	A C 8I
IC1009	B C 8D
IC1010	B C 7D
IC1011	A C 7D
IC1501	B C 4I
IC1502	A C 3I
IC1601	A C 5H
IC2001	A C 4F
IC2002	B C 5F
IC2003	B C 8E
IC2004	A C 5G
IC2006	B C 6E
IC2007	B C 5G
IC3001	B C 4B
IC3101	B C 3B
IC3102	A C 3B
IC3103	B C 3B
IC3151	A C 7B
IC3501	A C 7C
IC3502	B C 8B
IC3701	B C 8D
IC3702	B C 9D
IC3703	B C 9D
IC4001	A C 4C
IC4002	B C 3C
JACK	
J2001	A D 1B
COIL	
L1001	A C 6J
L1011	A C 9G
L1012	A C 8F
L1013	A C 9F
L1015	A C 9E
L1018	A C 6H
L1501	B C 5G
L1502	A C 5G
L2001	B C 3D
L2002	B C 6G
L2003	B C 6F
L2004	A C 6E
L2005	B C 6F
L2006	B C 6F
L2007	A C 7E
L2008	A C 7E
L2009	A C 5E
L2010	A C 4E
L2011	A C 4E
L2015	A C 3D
L3103	B C 6D
L3104	B C 6C
L3111	A C 6B
L3131	A C 6B
L3151	B C 7B
L3531	A C 6B
L3532	A C 6B
L3533	B C 7B
L3534	B C 7B
L3701	B C 7D
L3702	A C 9D
L4001	B C 6D
L4002	B C 6C
L4003	A C 6D
L4004	A C 3B
TRANSISTOR	
Q1001	A C 9J

REF.NO.	LOCATION
Q1002	A C 8J
Q1011	B C 8E
Q1012	B C 8E
Q1013	A C 8F
Q1014	B C 8F
Q1015	A C 8F
Q1016	B C 8F
Q1017	B C 8F
Q1018	B C 8E
Q1501	A C 4I
Q1602	A C 3I
Q1603	A C 3I
Q3101	A C 5A
Q3102	A C 5B
Q3111	B C 6B
Q3112	B C 5B
Q3113	A C 5B
Q3114	A C 5B
Q3115	B C 6B
Q3131	A C 6B
Q3132	B C 5B
Q3133	B C 5B
Q3501	A C 6C
Q3502	B C 6C
Q3503	B C 7B
RESISTOR	
R1002	A C 7H
R1003	A C 7H
R1004	A C 7H
R1005	A C 7H
R1006	A C 7H
R1009	A C 7H
R1010	A C 7H
R1011	A C 7H
R1012	A C 7H
R1013	A C 7H
R1014	A C 7H
R1015	A C 7H
R1018	A C 7H
R1019	A C 8H
R1020	A C 8H
R1021	A C 8H
R1022	A C 8H
R1025	A C 8H
R1026	A C 8H
R1027	A C 8I
R1028	A C 7H
R1029	A C 7H
R1030	A C 8H
R1031	A C 8H
R1032	A C 8I
R1033	A C 8I
R1035	A C 8J
R1036	A C 7H
R1037	A C 8I
R1038	A C 8I
R1041	A C 7J
R1043	A C 7I
R1045	A C 6I
R1046	A C 7I
R1047	A C 7I
R1048	A C 7I
R1049	A C 7I
R1050	B C 6I
R1051	A C 7H
R1052	A C 7H
R1053	A C 7H
R1061	A C 9I
R1062	A C 9I
R1063	A C 9I
R1064	A C 8J
R1065	A C 8J
R1073	A C 6J
R1074	A C 6J
R1075	A C 6J
R1076	A C 6J
R1077	A C 6I
R1078	A C 6I
R1079	A C 6J
R1081	A C 8H
R1082	A C 8H
R1083	A C 8I
R1084	A C 7H
R1085	A C 8H
R1091	B C 8E
R1092	B C 8E
R1093	B C 8F
R1094	B C 8F
R1095	B C 8F
R1096	B C 8F
R1097	B C 8F
R1098	B C 8E
R1099	B C 8E

REF.NO.	LOCATION
R1100	A C 8D
R1125	B C 8B
R1126	B C 8B
R1501	B C 3G
R1502	A C 3G
R1503	A C 3H
R1504	A C 3H
R1505	A C 3G
R1506	A C 3G
R1514	A C 3G
R1515	A C 3G
R1516	A C 3G
R1517	A C 5H
R1518	A C 5H
R1519	A C 5H
R1520	A C 5H
R1521	A C 5H
R1522	A C 5H
R1523	A C 5H
R1524	A C 5H
R1525	A C 5H
R1526	A C 5I
R1527	A C 5H
R1528	A C 5I
R1531	A C 5I
R1535	A C 4I
R1536	A C 4I
R1537	A C 4I
R1538	A C 4I
R1539	A C 4I
R1540	A C 5H
R1546	A C 5I
R1547	A C 4I
R1552	A C 4J
R1553	A C 4J
R1558	A C 3J
R1560	A C 4J
R1562	A C 3J
R1563	A C 3J
R1564	A C 3J
R1565	A C 4J
R1566	A C 4I
R1567	A C 3J
R1568	A C 3I
R1569	A C 3I
R1570	A C 3H
R1575	B C 2G
R1576	B C 3G
R1577	B C 3G
R1578	A C 3H
R1579	A C 2H
R1580	A C 2H
R1581	B C 3H
R1582	A C 3H
R1583	A C 3H
R1584	A C 3G
R1585	A C 3G
R1586	A C 3G
R1587	B C 2G
R1588	A C 3H
R1589	A C 2H
R1590	A C 2H
R1591	A C 5G
R1592	A C 5G
R1593	A C 5G
R1594	A C 4J
R1601	B C 9I
R1602	B C 9I
R1603	B C 9I
R1605	B C 9I
R1606	B C 9I
R1607	B C 9I
R1608	B C 9I
R1609	B C 9H
R1611	B C 9H
R1612	B C 9H
R1613	B C 9H
R1614	B C 9H
R1615	B C 9H
R1616	B C 9H
R1617	B C 9H
R1618	B C 9H
R1619	B C 9H
R1631	A C 5H
R1632	A C 5H
R1634	A C 5H
R1635	A C 5H
R1636	A C 5H
R1641	A C 3H
R1642	A C 3I
R1644	A C 2I
R1645	A C 3H
R1646	A C 2I

REF.NO.	LOCATION
R1647	A C 2I
R1648	A C 2I
R1649	A C 2I
R1650	A C 2I
R1651	A C 2I
R1653	A C 2I
R1655	A C 2I
R1661	A C 3I
R1662	A C 3I
R1663	A C 3I
R1665	A C 3I
R1666	A C 4I
R1667	A C 3I
R1668	A C 3I
R2009	A C 5F
R2010	B C 5F
R2011	A C 5F
R2012	A C 5F
R2013	B C 5F
R2014	B C 4F
R2015	A C 5F
R2016	B C 5F
R2017	B C 6F
R2018	A C 5F
R2019	A C 5F
R2020	B C 5E
R2021	B C 5E
R2022	B C 5E
R2023	B C 5E
R2027	B C 5E
R2031	B C 4E
R2032	B C 4E
R2033	A C 4G
R2034	B C 4G
R2035	A C 4G
R2036	B C 4G
R2037	B C 5G
R2038	A C 4G
R2039	A C 4G
R2040	A C 5G
R2041	B C 4E
R2042	B C 4E
R2043	A C 4E
R2044	A C 4E
R2046	B C 4E
R2047	B C 4E
R2048	B C 4E
R2049	A C 5D
R2050	B C 5E
R2051	B C 5E
R2052	B C 5E
R2053	A C 3E
R2054	A C 3E
R2055	A C 3E
R2056	A C 3E
R2057	A C 3E
R2058	A C 3E
R2059	A C 3E
R2060	A C 3E
R2061	A C 3E
R2062	A C 3E
R2071	B C 4F
R2072	B C 4F
R2073	B C 4F
R2074	B C 4F
R2084	B C 3E
R2085	B C 3F
R2086	B C 3E
R2087	B C 3F
R2088	B C 3E
R2089	B C 3F
R2098	A C 2B
R2101	B C 9G
R2102	B C 9G
R2103	B C 9G
R2104	B C 9G
R2106	B C 9G
R2107	B C 9G
R2108	B C 9G
R2109	B C 9G
R2110	B C 9G
R2112	B C 9G
R2113	B C 9G
R2114	B C 9G
R2115	B C 9G
R2116	B C 9H
R2117	B C 9H
R2118	B C 9H
R2119	B C 9H
R2121	B C 9H
R2122	B C 9H
R2123	B C 9H
R2124	B C 9H
R2125	B C 9H

REF.NO.	LOCATION
R2126	B C 9H
R2138	B C 5G
R2139	B C 5F
R2140	B C 5F
R2141	A C 5F
R2142	A C 5F
R2143	A C 5F
R2144	A C 5E
R2145	B C 5F
R2146	A C 5F
R2148	A C 5F
R2149	A C 5F
R2150	B C 5G
R3003	B C 5B
R3004	B C 5B
R3005	B C 5B
R3007	A C 5B
R3008	A C 4B
R3024	A C 5B
R3025	A C 4B
R3026	A C 4B
R3027	A C 4B
R3028	A C 4B
R3029	A C 4B
R3032	A C 4B
R3033	A C 4B
R3034	A C 4B
R3035	A C 4B
R3048	A C 4B
R3054	B C 4B
R3056	B C 4B
R3057	A C 4B
R3058	A C 4B
R3059	A C 4B
R3060	A C 4B
R3061	B C 4B
R3062	A C 4A
R3063	A C 4B
R3064	A C 4B
R3065	A C 4A
R3069	B C 5B
R3070	A C 4B
R3071	A C 4B
R3072	B C 5B
R3073	A C 5B
R3074	A C 4B
R3075	B C 5B
R3076	A C 4B
R3077	B C 5B
R3078	A C 4B
R3079	A C 4B
R3080	A C 5A
R3081	B C 5A
R3101	A C 5A
R3102	A C 5B
R3103	A C 5B
R3104	A C 5B
R3105	A C 5B
R3106	A C 5B
R3111	B C 6B
R3112	B C 6A
R3113	B C 6B
R3114	B C 6B
R3115	A C 6B
R3116	A C 6B
R3117	A C 6B
R3118	B C 5B
R3119	B C 5B
R3120	B C 5B
R3121	B C 6B
R3122	B C 6B
R3123	A C 5B
R3124	B C 5B
R3125	B C 5B
R3131	B C 6B
R3132	B C 6B
R3133	B C 6B
R3134	B C 6B
R3135	B C 6B
R3136	B C 6B
R3137	A C 5B
R3138	B C 6B
R3139	A C 5B
R3140	A C 5B
R3141	B C 5B
R3142	B C 5B
R3143	B C 5B
R3161	B C 3B
R3162	B C 3B
R3163	B C 4B
R3164	B C 3B
R3168	B C 4B
R3501	B C 7C

REF.NO.	LOCATION
R3502	B C 7C
R3503	B C 7C
R3504	A C 7B
R3505	B C 7C
R3506	B C 7B
R3507	A C 7B
R3508	A C 7B
R3509	A C 7B
R3510	A C 7B
R3511	B C 7C
R3512	B C 7C
R3521	B C 6B
R3522	B C 6B
R3523	B C 6C
R3524	B C 6C
R3526	B C 6B
R3527	B C 7B
R3528	B C 7B
R3529	B C 7B
R3531	B C 7C
R3532	B C 7C
R3533	B C 7C
R3534	B C 7C
R3701	B C 8C
R3702	B C 8C
R3703	B C 8C
R3704	B C 8C
R3705	A C 8C
R3706	B C 8D
R3707	B C 8D
R3708	B C 8D
R3709	B C 8D
R3710	B C 8D
R3711	B C 9C
R3712	B C 9D
R3713	B C 9D
R3714	B C 9D
R3715	B C 8D
R3716	B C 8D
R3717	B C 8C
R3718	B C 8C
R3719	B C 9C
R3720	B C 9C
R3721	B C 9D
R3722	B C 9D
R3723	B C 9D
R3724	B C 9D
R3725	B C 9C
R3726	B C 9C
R3727	B C 9C
R3728	B C 9C
R3731	B C 9C
R3732	B C 9C
R3733	B C 9C
R3734	B C 9D
R3735	B C 9C
R3736	B C 9D
R3740	A C 9D
R4001	B C 5D
R4002	B C 5D
R4003	B C 4C
R4004	B C 4C
R4005	B C 4C
R4006	A C 5D
R4007	A C 5D
R4008	A C 5D
R4009	A C 5D
R4010	B C 4C
R4011	B C 4C
R4012	B C 4C
R4013	B C 4C
R4015	A C 4D
R4016	A C 4D
R4017	A C 4D
R4018	A C 4D
R4020	A C 5C
R4021	A C 5C
R4022	A C 5C
R4025	B C 5C
R4026	B C 5C
R4027	B C 5C
R4028	B C 5C
R4029	B C 5C
R4030	B C 5C
R4031	B C 5D
R4032	B C 5C
R4033	B C 5C
R4034	B C 5C
R4035	B C 3C
R4036	A C 3C
R4037	A C 3C
R4038	A C 3C
R4039	A C 3C

REF.NO.	LOCATION		
R4041	B	C	4C
R4042	B	C	4C
R4043	B	C	4C
R4044	B	C	5C
R4045	B	C	5C
R4046	B	C	5C
RA1001	A	C	8I
RA1002	A	C	7I
RA1003	A	C	7I
RA1004	A	C	7I
RA1005	A	C	9I
RA1006	A	C	9I
RA1501	A	C	4H
RA1502	A	C	4H
RA1503	A	C	4H
RA1504	A	C	4H
RA1505	A	C	5J
RA1506	A	C	5I
RA1507	B	C	6I
RA1508	B	C	6I
RA1509	A	C	5I
RA1510	A	C	4I
RA4001	A	C	4B
RA4002	A	C	4C
RA4003	B	C	4B
RA4004	B	C	4C
RA4006	A	C	3C
RA4007	A	C	3C
RA4008	B	C	3C
TEST POINT			
TP1001	A	C	9I
TP1002	A	C	9I
TP1501	A	C	2I
TP1503	A	C	3I
TP1504	A	C	3I
TP1505	A	C	3I
TP1507	A	C	2J
TP1508	A	C	3J
TP1509	A	C	3J
TP1510	A	C	2J
OTHER			
K1001	A	C	7H
K1011	A	C	8G
K1012	B	C	7E
K2001	B	C	5G
K2002	A	C	6E
K3101	B	C	3B
LC1002	A	C	8G
LC1003	A	C	8F
LC1005	A	C	8E
LC3101	A	C	3B
TH2001	A	C	5F
TL1001	B	C	7H
TL1002	B	C	7H
TL1003	B	C	7H
TL1004	B	C	7H
TL1005	B	C	7H
TL1006	B	C	7H
TL1007	B	C	7H
TL1008	B	C	7H
TL1009	B	C	7H
TL1010	B	C	7H
TL1011	B	C	7H
TL1012	B	C	7H
TL1013	B	C	7H
TL1014	B	C	7H
TL1015	B	C	7H
TL1016	B	C	7H
TL1017	B	C	7H
TL1018	B	C	7H
TL1019	B	C	7H
TL1020	B	C	7H
TL1021	B	C	7H
TL1022	B	C	8H
TL1023	B	C	8H
TL1024	B	C	8H
TL1025	B	C	8H
TL1026	B	C	8H
TL1027	B	C	8H
TL1028	B	C	8H
TL1029	B	C	8H
TL1030	B	C	8H
TL1031	B	C	8H
TL1032	B	C	8H
TL1033	B	C	8H
TL1034	B	C	8H
TL1035	B	C	8H
TL1036	B	C	8H
TL1037	B	C	8H
TL1038	B	C	8H
TL1039	B	C	8H
TL1040	B	C	8H

REF.NO.	LOCATION		
TL1041	B	C	8H
TL1042	B	C	8I
TL1043	B	C	8I
TL1044	B	C	8I
TL1045	B	C	8I
TL1046	B	C	8I
TL1047	B	C	8I
TL1048	B	C	8I
TL1049	B	C	8I
TL1050	B	C	8I
TL1051	B	C	8I
TL1052	B	C	8I
TL1053	B	C	8I
TL1054	B	C	8I
TL1055	B	C	8I
TL1056	B	C	8I
TL1057	B	C	8I
TL1058	B	C	8I
TL1059	B	C	8I
TL1060	B	C	8I
TL1061	B	C	8I
TL1062	B	C	8I
TL1063	B	C	8I
TL1064	B	C	8I
TL1065	B	C	8J
TL1066	B	C	8J
TL1067	B	C	8J
TL1068	B	C	8J
TL1069	B	C	8J
TL1070	B	C	8J
TL1071	B	C	8J
TL1072	B	C	8J
TL1073	B	C	8J
TL1074	B	C	8J
TL1075	B	C	8J
TL1076	B	C	8J
TL1077	B	C	7J
TL1078	B	C	7J
TL1079	B	C	7J
TL1080	B	C	7J
TL1081	B	C	7J
TL1082	B	C	7J
TL1083	B	C	7J
TL1084	B	C	7J
TL1085	B	C	7J
TL1086	B	C	7J
TL1087	B	C	7J
TL1088	B	C	7J
TL1089	B	C	7J
TL1090	B	C	7J
TL1091	B	C	7J
TL1092	B	C	7J
TL1093	B	C	7J
TL1094	B	C	7J
TL1095	B	C	7J
TL1096	B	C	7J
TL1097	B	C	6I
TL1098	B	C	6I
TL1099	B	C	6I
TL1100	B	C	6I
TL1101	B	C	6I
TL1102	B	C	6I
TL1103	B	C	6I
TL1104	B	C	6I
TL1105	B	C	6I
TL1106	B	C	6I
TL1107	B	C	6I
TL1108	B	C	6I
TL1109	B	C	6I
TL1110	B	C	6I
TL1111	B	C	6I
TL1112	B	C	6I
TL1113	B	C	6I
TL1114	B	C	6I
TL1115	B	C	6I
TL1116	B	C	6I
TL1117	B	C	6I
TL1118	B	C	6I
TL1119	B	C	6I
TL1120	B	C	6I
TL1121	B	C	6H
TL1122	B	C	6H
TL1123	B	C	6H
TL1124	B	C	6H
TL1125	B	C	6H
TL1126	B	C	6H
TL1127	B	C	6H
TL1128	B	C	6H
TL1501	B	C	3G
TL1502	B	C	3G
TL1503	B	C	3G
TL1504	B	C	3G
TL1505	B	C	3G

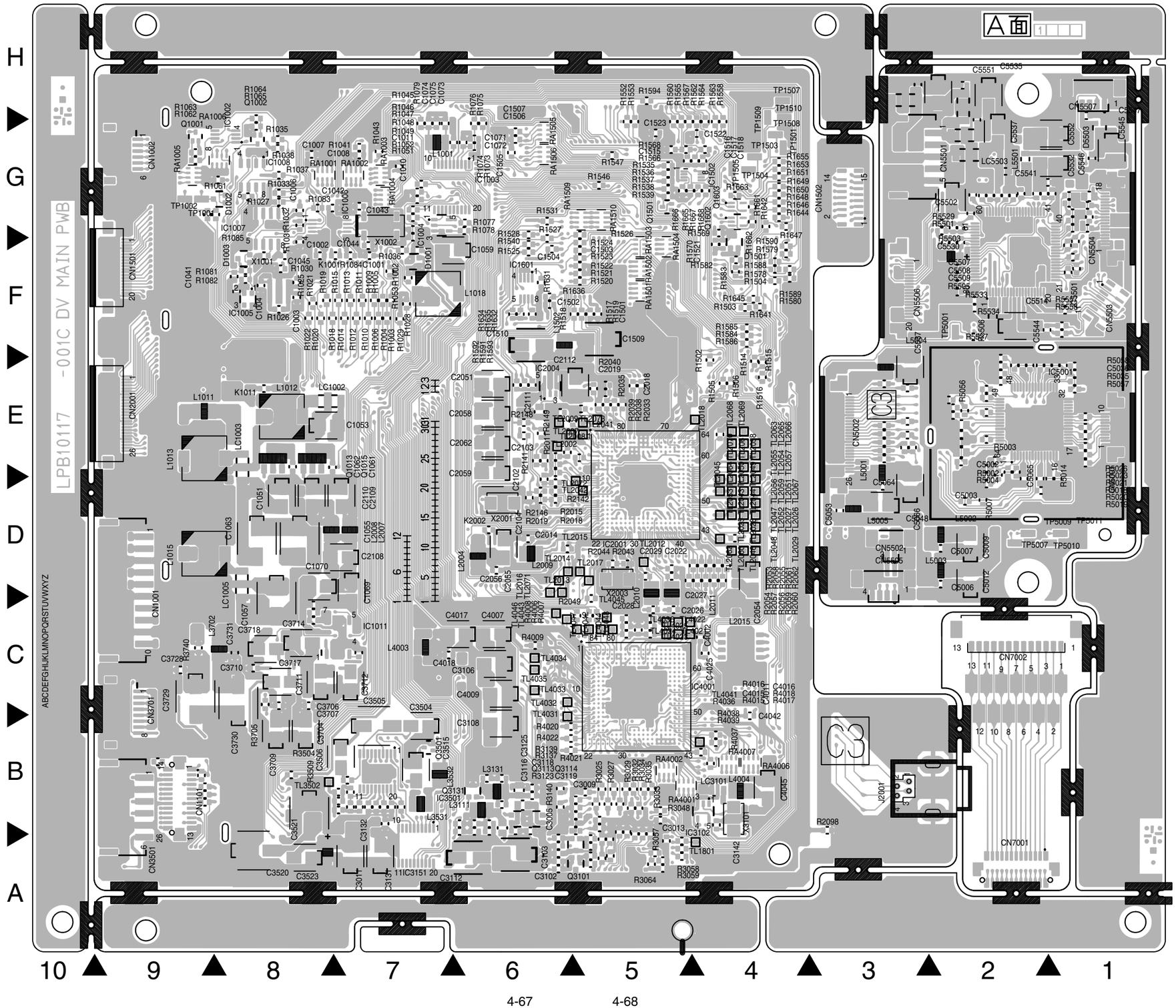
REF.NO.	LOCATION		
TL1506	B	C	3G
TL1507	B	C	3G
TL1508	B	C	3G
TL1509	B	C	3G
TL1510	B	C	3G
TL1511	B	C	3G
TL1512	B	C	3G
TL1513	B	C	3G
TL1514	B	C	3G
TL1515	B	C	3G
TL1516	B	C	3G
TL1517	B	C	3G
TL1518	B	C	3G
TL1519	B	C	4G
TL1520	B	C	4G
TL1521	B	C	4G
TL1522	B	C	4G
TL1523	B	C	4G
TL1524	B	C	4G
TL1525	B	C	4G
TL1526	B	C	4G
TL1527	B	C	4G
TL1528	B	C	4G
TL1529	B	C	4G
TL1530	B	C	4G
TL1531	B	C	4G
TL1532	B	C	4G
TL1533	B	C	4G
TL1534	B	C	4G
TL1535	B	C	4G
TL1536	B	C	4G
TL1537	B	C	4G
TL1538	B	C	4G
TL1539	B	C	4G
TL1540	B	C	5G
TL1541	B	C	5G
TL1542	B	C	5G
TL1543	B	C	5G
TL1544	B	C	5G
TL1545	B	C	5G
TL1546	B	C	5G
TL1547	B	C	5G
TL1548	B	C	5G
TL1549	B	C	5G
TL1550	B	C	5G
TL1551	B	C	5G
TL1552	B	C	5G
TL1553	B	C	5G
TL1554	B	C	5G
TL1555	B	C	6G
TL1556	B	C	5H
TL1557	B	C	5H
TL1558	B	C	6H
TL1559	B	C	5H
TL1560	B	C	5H
TL1561	B	C	6H
TL1562	B	C	5H
TL1563	B	C	5H
TL1564	B	C	6H
TL1565	B	C	5H
TL1566	B	C	5H
TL1567	B	C	6H
TL1568	B	C	5H
TL1569	B	C	5H
TL1570	B	C	6H
TL1571	B	C	5H
TL1572	B	C	5H
TL1573	B	C	6H
TL1574	B	C	5H
TL1575	B	C	5H
TL1576	B	C	6H
TL1577	B	C	5I
TL1578	B	C	5I
TL1579	B	C	6I
TL1580	B	C	5I
TL1581	B	C	5I
TL1582	B	C	6I
TL1583	B	C	5I
TL1584	B	C	5I
TL1585	B	C	6I
TL1586	B	C	5I
TL1587	B	C	5I
TL1588	B	C	6I
TL1589	B	C	5I
TL1590	B	C	5I
TL1591	B	C	6I
TL1592	B	C	5I
TL1593	B	C	5I
TL1594	B	C	6I
TL1595	B	C	5I
TL1596	B	C	5I
TL1597	B	C	6I
TL1598	B	C	5I

REF.NO.	LOCATION		
TL1599	B	C	5I
TL1600	B	C	6I
TL1601	B	C	5J
TL1602	B	C	5J
TL1603	B	C	6J
TL1604	B	C	5J
TL1605	B	C	5J
TL1606	B	C	5J
TL1607	B	C	5J
TL1608	B	C	5J
TL1609	B	C	5J
TL1610	B	C	5J
TL1611	B	C	5J
TL1612	B	C	5J
TL1613	B	C	5J
TL1614	B	C	5J
TL1615	B	C	5J
TL1616	B	C	5J
TL1617	B	C	5J
TL1618	B	C	5J
TL1619	B	C	5J
TL1620	B	C	5J
TL1621	B	C	5J
TL1622	B	C	5J
TL1623	B	C	4J
TL1624	B	C	4J
TL1625	B	C	4J
TL1626	B	C	4J
TL1627	B	C	4J
TL1628	B	C	4J
TL1629	B	C	4J
TL1630	B	C	4J
TL1631	B	C	4J
TL1632	B	C	4J
TL1633	B	C	4J
TL1634	B	C	4J
TL1635	B	C	4J
TL1636	B	C	4J
TL1637	B	C	4J
TL1638	B	C	4J
TL1639	B	C	4J
TL1640	B	C	4J
TL1641	B	C	4J
TL1642	B	C	4J
TL1643	B	C	4J
TL1644	B	C	3J
TL1645	B	C	3J
TL1646	B	C	3J
TL1647	B	C	3J
TL1648	B	C	3J
TL1649	B	C	3J
TL1650	B	C	3J
TL1651	B	C	3J
TL1652	B	C	3J
TL1653	B	C	3J
TL1654	B	C	3J
TL1655	B	C	3J
TL1656	B	C	3J
TL1657	B	C	3J
TL1658	B	C	3J
TL1659	B	C	2J
TL1660	B	C	3J
TL1661	B	C	3J
TL1662	B	C	2J
TL1663	B	C	3J
TL1664	B	C	3J
TL1665	B	C	2J
TL1666	B	C	3I
TL1667	B	C	3I
TL1668	B	C	2I
TL1669	B	C	3I
TL1670	B	C	3I
TL1671	B	C	2I
TL1672	B	C	3I
TL1673	B	C	3I
TL1674	B	C	2I
TL1675	B	C	3I
TL1676	B	C	3I
TL1677	B	C	2I
TL1678	B	C	3I
TL1679	B	C	3I
TL1680	B	C	2I
TL1681	B	C	3I
TL1682	B	C	3I
TL1683	B	C	2I
TL1684	B	C	3I
TL1685	B	C	3I
TL1686	B	C	2I
TL1687	B	C	3I
TL1688	B	C	3I
TL1689	B	C	2I
TL1690	B	C	3H
TL1691	B	C	3H

REF.NO.	LOCATION		
TL1692	B	C	2H
TL1693	B	C	3H
TL1694	B	C	3H
TL1695	B	C	2H
TL1696	B	C	3H
TL1697	B	C	3H
TL1698	B	C	2H
TL1699	B	C	3H
TL1700	B	C	3H
TL1701	B	C	2H
TL1702	B	C	3H
TL1703	B	C	3H
TL1704	B	C	2H
TL1705	B	C	3H
TL1706	B	C	3H
TL1707	B	C	2H
TL1708	B	C	3H
TL1801	A	C	3B
TL2002	A	C	5F
TL2007	A	C	5F
TL2008	A	C	5F
TL2009	A	C	5F
TL2012	A	C	4E
TL2013	A	C	5E
TL2014	A	C	5E
TL2015	A	C	5E
TL2016	A	C	5E
TL2017	A	C	5E
TL2018	A	C	3F
TL2021	A	C	3F
TL2022	A	C	3E
TL2023	A	C	3E
TL2024	A	C	3E
TL2025	A	C	3E
TL2026	A	C	3E
TL2027	A	C	3E
TL2028	A	C	3E
TL2029	A	C	3E
TL2041	A	C	5F
TL2042	A	C	5F
TL2043	A	C	3F
TL2044	A	C	3F
TL2045	A	C	3F
TL2046	A	C	3E
TL2047	A	C	3E
TL2048	A	C	3E
TL2049	A	C	3F
TL2050	A	C	3F
TL2051	A	C	3F
TL2052	A	C	3E
TL2053	A	C	3F
TL2054	A	C	3F
TL2055	A	C	3F
TL2056	A	C	3F
TL2057	A	C	3F
TL2058	A	C	3F
TL2059	A	C	3F
TL2060	A	C	3E
TL2061	A	C	3F
TL2062	A	C	3E
TL2063	A	C	3F
TL2064	A	C	3F
TL2065	A	C	3F
TL2066	A	C	3F
TL2067	A	C	3F
TL2068	A	C	3F
TL2069	A	C	3F
TL2070	A	C	3F
TL2071	A	C	5E
TL2072	A	C	5F
TL2073	A	C	5F
TL2074	A	C	5F
TL2075	A	C	5G
TL2076	A	C	5G
TL2077	A	C	5G
TL2078	A	C	5G
TL3501	B	C	7B
TL3502	A	C	8B
TL4021	A	C	3D
TL4022	A	C	3D
TL4023	A	C	4D
TL4024	A	C	4D
TL4025	A	C	4D
TL4031	A	C	5C
TL4032	A	C	5C
TL4033	A	C	5C
TL4034	A	C	5D
TL4035	A	C	5D
TL4036	A	C	4D
TL4041	A	C	3C
TL4042	A	C	5D
TL4043	A	C	5D
TL4044	A	C	4D

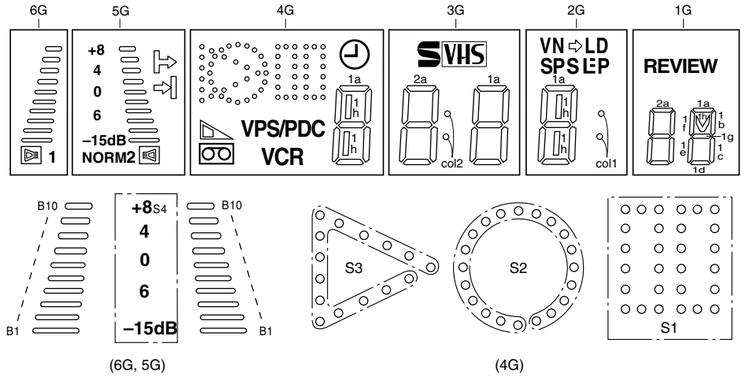
REF.NO.	LOCATION		
TL4045	A	C	4D
TL4046	A	C	5D
TL4047	A	C	5D
TL4048	A	C	4D
X1001	A	C	8H
X1002	A	C	7I
X2001	A	C	6F
X2003	A	C	4E
X3101	A	C	3B

— COMPONENT SIDE(A) —

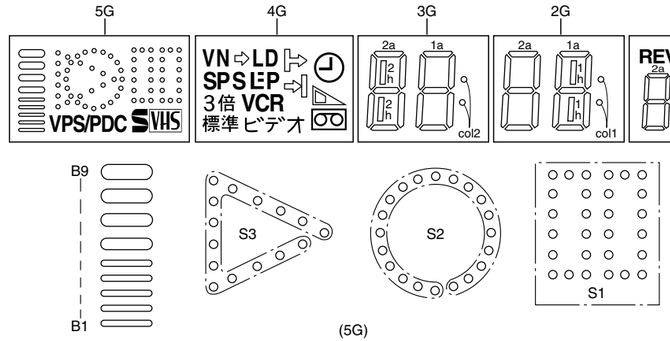


4.32 FDP GRID ASSIGNMENT AND ANODE CONNECTION

[A] (FDP with audio level indicator)



[B] (FDP without audio level indicator)



ANODE CONNECTION [A]

	6G	5G	4G	3G	2G	1G
P 1	—	⇨	S2	1a	1a	1a
P 2	—	⇦	S1	1b	1b	1b
P 3	—	S4	S3	1f	1f	1f
P 4	—	NORM	VPS/PDC	1g	1g	1g
P 5	1	2	🕘	1c	1c	1c
P 6	▶	◀	◢	1e	1e	1e
P 7	B10	B10	📼	1d	1d	1d
P 8	B9	B9	VCR	col2	1h	1h
P 9	B8	B8	1a	2a	col1	2a
P10	B7	B7	1b	2b	⇨	2b
P11	B6	B6	1f	2f	VN	2f
P12	B5	B5	1g	2g	LD	2g
P13	B4	B4	1c	2c	SP	2c
P14	B3	B3	1e	2e	S (SEP)	2e
P15	B2	B2	1d	2d	= (SEP)	2d
P16	B1	B1	1h	SVHS	LP (SEP)	REVIEW

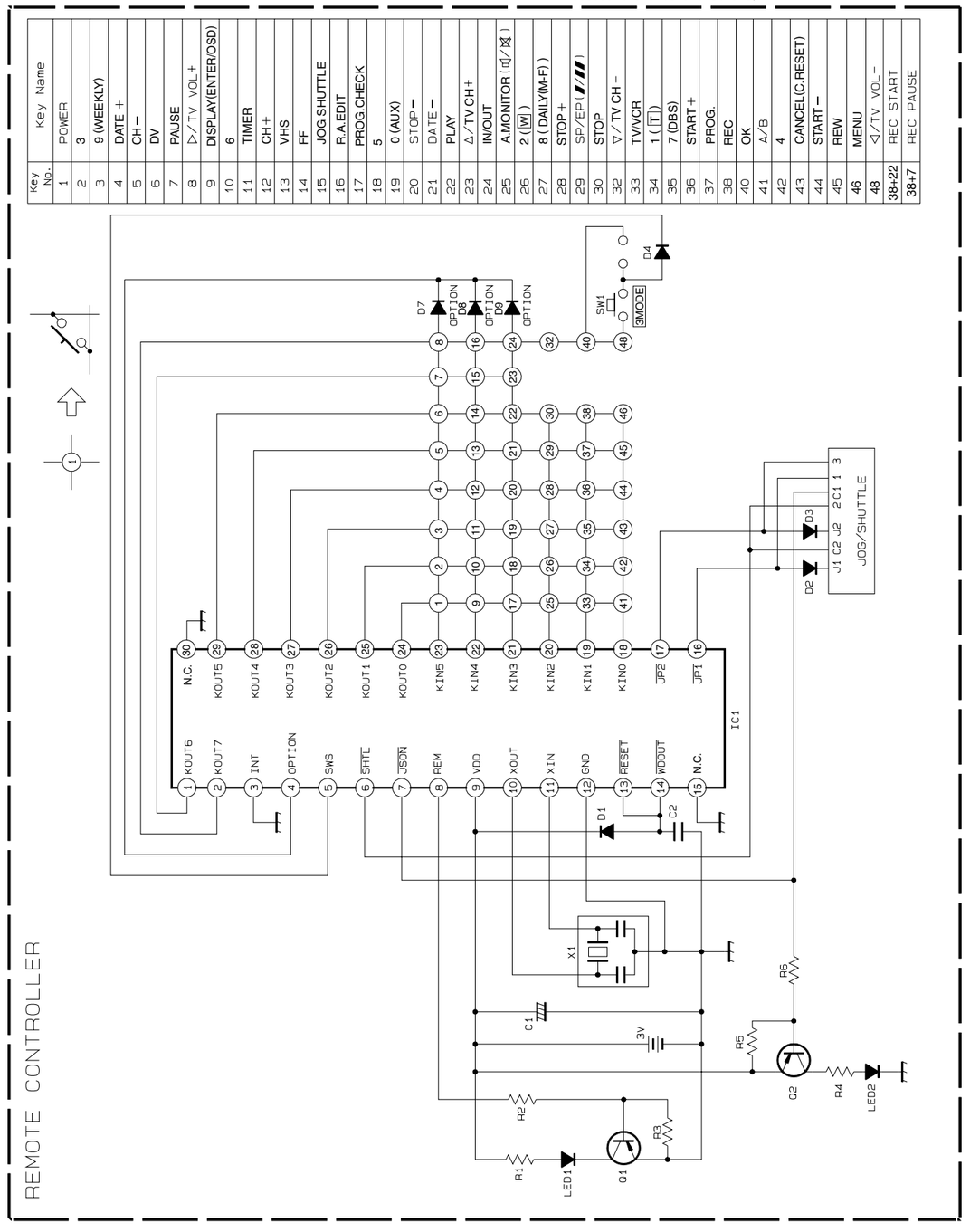
ANODE CONNECTION [B]

	5G	4G	3G	2G	1G
P 1	S2	⇨	1a	1a	1a
P 2	S1	⇦	1b	1b	1b
P 3	S3	3倍	1f	1f	1f
P 4	VPS/PDC	標準	1g	1g	1g
P 5	SVHS	🕘	1c	1c	1c
P 6	—	◢	1e	1e	1e
P 7	—	📼	1d	1d	1d
P 8	B9	VCR	col2	1h	1h
P 9	B8	ビデオ	2a	2a	2a
P10	B7	⇨	2b	2b	2b
P11	B6	VN	2f	2f	2f
P12	B5	LD	2g	2g	2g
P13	B4	SP	2c	2c	2c
P14	B3	S (SEP)	2e	2e	2e
P15	B2	= (SEP)	2d	2d	2d
P16	B1	LP (SEP)	2h	col1	REVIEW

4.33 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
   Avoid replacing individual parts.
   Replace the entire unit only.

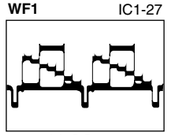
Key No.	Key Name
1	POWER
2	3
3	9 (WEEKLY)
4	DATE +
5	CH –
6	DV
7	PAUSE
8	▷/TV VOL+
9	DISPLAY(ENTER/OSD)
10	6
11	TIMER
12	CH+
13	VHS
14	FF
15	JOG.SHUTTLE
16	R.A.EDIT
17	PROG.CHECK
18	5
19	0 (AUX)
20	STOP –
21	DATE –
22	PLAY
23	△/CH+
24	IN/OUT
25	A.MONITOR (d/⊠)
26	2 (W)
27	8 (DAILY(M-F))
28	STOP+
29	SP/EP(▶/▶▶)
30	STOP
32	▽/TV CH –
33	TV/VCR
34	1 (T)
35	7 (DBS)
36	START +
37	PROG.
38	REC
40	OK
41	A/B
42	4
43	CANCEL(C.RESET)
44	START –
45	REW
46	MENU
48	◁/TV VOL–
38+22	REC START
38+7	REC PAUSE



4.34 WAVEFORMS

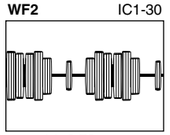
< VIDEO >

WF1 IC1-27



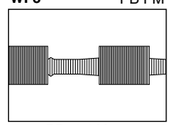
PB 2.3 Vp-p
50 mV/20 µsec/DIV

WF2 IC1-30



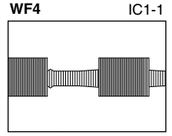
PB 0.72 Vp-p
20 mV/20 µsec/DIV

WF3 TP106 PB FM



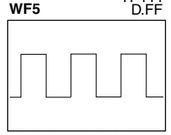
PB 1.2 Vp-p
50 mV/5 msec/DIV

WF4 IC1-1



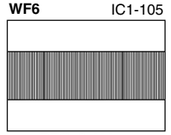
PB 1.2 Vp-p
50 mV/5 msec/DIV

WF5 TP111 D.FF



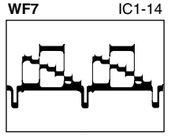
REC/PB 4.6 Vp-p
0.1 V/10 msec/DIV

WF6 IC1-105



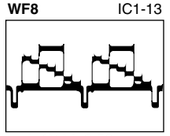
REC 2.4 Vp-p
0.1 V/1 msec/DIV

WF7 IC1-14



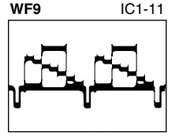
PB 0.56 Vp-p
20 mV/20 µsec/DIV

WF8 IC1-13



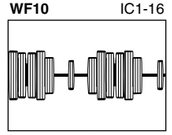
REC/PB 0.56 Vp-p
20 mV/20 µsec/DIV

WF9 IC1-11



REC/PB 0.56 Vp-p
20 mV/20 µsec/DIV

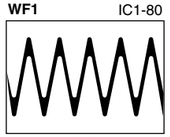
WF10 IC1-16



REC 0.76 Vp-p
20 mV/20 µsec/DIV

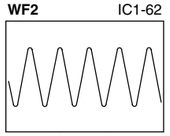
< AUDIO >

WF1 IC1-80



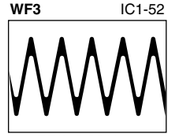
REC 0.24 Vp-p
5 mV/0.5 msec/DIV

WF2 IC1-62



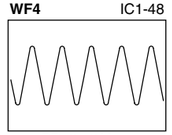
REC/PB 1.0 Vp-p
20 mV/0.5 msec/DIV

WF3 IC1-52



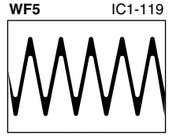
REC 0.22 Vp-p
2 mV/0.5 msec/DIV

WF4 IC1-48



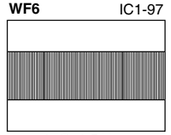
PB 0.76 Vp-p
20 mV/0.5 msec/DIV

WF5 IC1-119



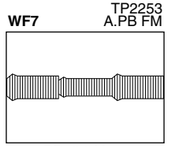
REC 0.96 Vp-p
20 mV/0.5 msec/DIV

WF6 IC1-97



REC 1.5 Vp-p
50 mV/5 msec/DIV

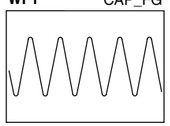
WF7 TP2253 A.PB FM



PB 0.6 Vp-p
50 mV/5 msec/DIV

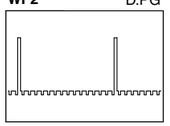
< SYSCON >

WF1 CN3003-2 CAP_FG



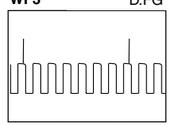
REC/PB 3.2 Vp-p
50 mV/0.5 msec/DIV

WF2 CN3001-4 D.PG



REC/PB 4.8 Vp-p
0.1 V/10 msec/DIV

WF3 CN3001-5 D.FG

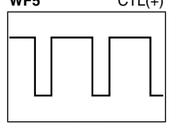


REC/PB 4.6 Vp-p
0.1 V/10 msec/DIV

WF4 TP4001 CTL.P

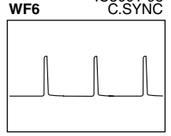
PB 2.3 Vp-p
50 mV/10 msec/DIV

WF5 IC3001-1 CTL(+)



REC 4.0 Vp-p
0.1 V/10 msec/DIV

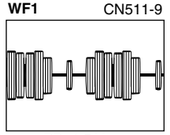
WF6 IC3001-98 C.SYNC



REC/PB 4.2 Vp-p
0.1 V/20 µsec/DIV

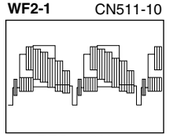
< S-SUB >

WF1 CN511-9



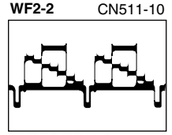
PB 1.5 Vp-p
50 mV/20 µsec/DIV

WF2-1 CN511-10



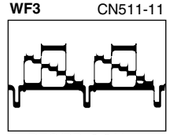
REC 1.8 Vp-p
50 mV/20 µsec/DIV

WF2-2 CN511-10



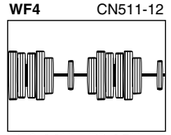
REC/PB 1.8 Vp-p
50 mV/20 µsec/DIV

WF3 CN511-11



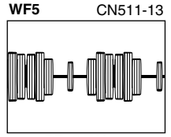
REC/PB 0.8 Vp-p
20 mV/20 µsec/DIV

WF4 CN511-12



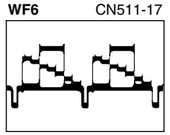
REC 0.6 Vp-p/PB 0.7 V p-p
20 mV/20 µsec/DIV

WF5 CN511-13



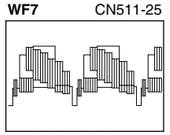
PB 0.7 Vp-p
20 mV/20 µsec/DIV

WF6 CN511-17



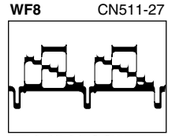
PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF7 CN511-25



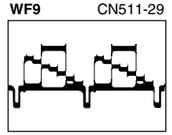
REC/PB 2.4 Vp-p
50 mV/20 µsec/DIV

WF8 CN511-27



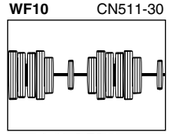
REC/PB 0.6 Vp-p
20 mV/20 µsec/DIV

WF9 CN511-29



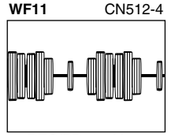
PB 0.6 Vp-p
20 mV/20 µsec/DIV

WF10 CN511-30



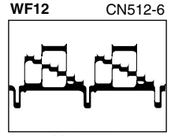
REC 0.76 Vp-p
20 mV/20 µsec/DIV

WF11 CN512-4



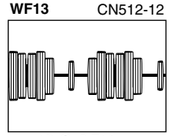
REC/PB 1.5 Vp-p
50 mV/20 µsec/DIV

WF12 CN512-6



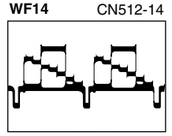
REC/PB 2.3 Vp-p
50 mV/20 µsec/DIV

WF13 CN512-12



REC 0.7 Vp-p
20 mV/20 µsec/DIV

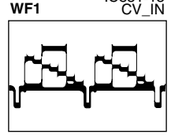
WF14 CN512-14



REC 1.0 Vp-p
20 mV/20 µsec/DIV

< ON SCREEN >

WF1 IC851-15 CV_IN

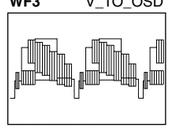


REC/PB 2.0 Vp-p
50 mV/20 µsec/DIV

WF2 IC851-13 CVOUT

REC/PB 2.0 Vp-p
50 mV/20 µsec/DIV

WF3 CN851-14 V_TO_OSD



REC/PB 2.4 Vp-p
50 mV/20 µsec/DIV

4.35 VOLTAGE CHARTS

<SW REGULATOR>

MODE PIN NO.	REC	PLAY
IC5101		
1	7.9	7.9
2	7.9	7.9
3	87.4	87.4
4	16.1	16.1
5	7.8	0
IC5301		
1	2.4	2.4
2	0	0
3	10.6	10.6
CN5201		
1	-19.3	-19.3
2	0	0
3	-15.6	-15.6
4	0	0
5	0	0
6	2.2	2.2
7	0	
8	43.3	43.3
9	12.3	12.3
10	4.3	4.3
11	4.3	4.3
12	31.7	31.7
13	4.3	4.3
14	-28.3	-28.3
15	7.2	7.2
16	-7.2	-7.2
17	6.4	6.4
18	6.4	6.4
19	19.1	19.1

<REGULATOR>

MODE PIN NO.	REC	PLAY
IC5321		
1	4.3	4.3
2	3.2	3.2
3	0	0
4	2.6	2.6
CN5301		
1	21.4	21.4
2	6.4	6.4
3	6.4	6.4
4	-7.2	-7.2
5	7.2	7.2
6	-28.3	-28.3
7	4.3	4.3
8	31.7	31.7
9	4.3	4.3
10	4.3	4.3
11	12.3	12.3
12	43.3	43.3
13	0	0
14	2.2	2.2
15	0	0
16	0	0
17	-15.6	-15.6
18	0	0
19	-19.3	-19.3
CN5321		
1	12.2	12.2
2	11.6	11.6
3	11.5	11.5
4	0	0
5	0	0
6	-19.3	-19.3
7	-28.4	-28.4
8	-15.8	-15.8
9	0	0
10	4.8	4.8
11	0	0
12	4.8	4.8
13	0	0
14	19.0	19.0
15	5.0	5.0
CN5322		
1	5.6	5.6
2	43.3	43.3
3	5.0	5.0
4	4.9	4.9
5	-7.3	-7.3
6	12.2	12.2
7	11.4	11.4
8	0	0
9	0	0
10	0	0
11	31.9	31.9
CN5323		
1	-7.2	-7.2
2	5.1	5.1
3	0	0
4	3.2	3.2
5	3.2	3.2
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0	0
10	0	0
CN5324		
1	6.7	6.7
2	0	0
3	7.1	7.1
4	5.1	5.1
5	0	0
CN5325		
1	11.2	11.2
2	0	0

<VIDEO/AUDIO>

MODE PIN NO.	REC	PLAY
IC1		
1	4.2	2.1
2	2.8	2.8
3	2.6	2.6
4	1.9	1.4
5	1.9	1.4
6	2.4	2.4
7	2.1	0.7
8	0	0
9	2.7	2.7
10	2.2	2.2
11	3.1	3.1
12	2.8	2.8
13	3.1	3.1
14	3.5	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	1.9	1.9
20	0	2.8
21	0	1.9
22	2.8	2.8
23	3.1	2.9
24	4.8	4.8
25	0.3	0.3
26	0	0
27	1.3	2.3
28	2.3	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.6	2.6
33	4.9	4.9
34	2.7	2.2
35	4.8	4.8
36	2.6	2.6
37	2.3	2.3
38	-	-
39	1.2	1.2
40	-	-
41	2.5	2.5
42	-	-
43	0	0
44	2.1	2.1
45	4.6	4.6
46	4.2	4.2
47	2.9	2.9
48	2.6	2.6
49	4.9	4.9
50	2.5	2.5
51	2.8	2.8
52	2.3	2.3
53	2.3	2.3
54	2.5	2.5
55	2.1	2.1
56	1.4	1.4
57	2.3	2.3
58	8.4	8.4
59	4.6	4.6
60	4.2	4.2
61	4.2	4.2
62	4.2	4.2
63	2.3	2.3
64	2.3	2.3
65	1.4	1.4
66	2.8	3.2
67	4.2	4.2
68	4.2	4.2
69	2.3	2.3
70	0	0
71	0.3	0.3
72	1.2	1.2
73	0.2	0.2
74	2.2	2.2
75	2.4	2.4
76	0	0
77	2.5	2.5
78	0.3	0.3
79	1.2	1.2
80	0.2	0.2
81	2.2	2.2
82	0.7	0.7
83	0	0
84	2.3	2.3
85	2.3	2.3
86	2.2	2.2
87	1.5	1.5
88	2.2	2.2
89	2.2	2.2
90	2.3	2.3
91	0.1	0.1
92	0	0
93	0	2.6
94	0	0
95	0	0
96	2.4	2.4
97	2.7	2.3
98	2.4	2.4
99	4.9	4.9
100	4.9	4.9
101	0	0
102	0	0
103	0	0
104	2.4	2.4
105	2.3	2.3
106	2.3	2.3
107	4.9	4.9
108	0	0
109	0	0
110	0	0
111	0	2.5
112	2.6	2.6
113	1.7	0.9
114	0	0
115	2.5	2.5
116	2.5	2.5
117	2.5	2.5
118	0	0
119	2.4	2.4
120	4.6	4.6
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.3	2.3
6	2.3	2.3
7	2.3	2.3
8	2.3	2.3
9	2.7	2.3
10	2.7	2.3
11	2.7	2.3
12	0	0
13	0	0
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	2.1	2.4
7	2.4	2.4
CN2002		
1	0	0
2	0	0

<SYSCON>

MODE PIN NO.	REC	PLAY
IC3001		
1	2.7	2.7
2	0	0
3	1.8	2.4
4	2.4	2.4
5	0	0.6
6	2.5	2.5
7	2.4	2.4
8	2.4	2.4
9	4.9	4.9
10	4.8	4.8
11	0	0
12	0	0
13	0	0
14	4.3	4.3
15	4.4	4.4
16	0.6	0.6
17	2.7	2.7
18	5.0	5.0
19	0	0
20	4.5	4.5
21	0	2.5
22	0	0
23	0	0
24	4.8	4.8
25	0	0
26	4.9	4.9
27	4.9	4.9
28	4.8	4.8
29	4.8	4.8
30	0	0
31	0	0
32	0	0
33	0	0
34	0	0
35	0	0
36	0	0
37	0	0
38	1.9	1.9
39	4.2	4.2
40	0	0
41	4.7	4.7
42	4.5	4.5
43	0	0
44	0	0
45	4.8	4.8
46	4.7	4.7
47	0	0
48	4.8	4.8
49	4.2	4.2
50	4.6	4.6
51	4.8	4.8
52	3.4	1.1
53	4.3	4.3
54	-	-
55	-	-
56	5.1	0
57	0	0
58	5.2	0
59	0	0
60	0	0
61	0	0
62	0	0
63	0	0
64	-	-
65	-	-
66	-	-
67	-	-
68	0	0
69	-	-
70	4.8	4.8
71	4.8	4.8
72	4.8	4.8
73	4.8	4.8
74	0	0
75	4.5	4.5
76	4.5	4.5
77	0	0
78	0	0
79	4.8	4.8
80	0	0
81	4.8	4.8
82	4.8	4.8
83	2.5	2.5
84	0	0
85	0	0
86	4.5	4.5
87	4.8	0
88	4.8	4.8
89	0	0
90	0	0
91	2.7	2.8
92	0	0
93	5.2	5.2
94	0	4.8
95	0	0
96	0	0
97	0.5	0.5
98	0.4	0.4
99	0	2.7
100	2.5	2.5
101	2.5	2.5
102	1.2	1.2
103	0	0
104	0	0
105	4.8	4.8
106	4.8	4.8
107	0.1	0.1
108	1.5	1.5
109	4.8	4.8
110	0	0
111	0	0
112	2.4	2.4
IC3002		
1	4.8	4.8
2	4.8	4.8
3	0	0
IC3003		
1	0	0
2	0	0
3	0	0
4	0	0
5	4.5	4.5
6	4.5	4.5
7	0	0
8	4.9	4.9
IC3004		
1	12.2	12.2
2	0	0
3	0	0
4	0	0
5	12.2	12.2
6	12.2	12.2
7	0	0
8	0	0
9	0	0
CN3001		
1	11.6	11.6
2	0	0
3	1.4	1.4
4	0.1	0.1
5	1.5	1.5
CN3002		
1	0	0
2	0	0
CN3003		
1	0	0
2	2.4	2.4
3	2.5	2.4
4	4.9	4.9
5	0	0
6	4.8	4.8
7	-	-
8	11.4	11.4
CN3004		
1	4.9	4.9
2	4.9	4.9
3	0	0
4	0	0
CN3011		
1	4.9	4.9
2	4.9	4.9
3	4.3	4.3
4	4.8	4.8
5	4.4	3.7
6	4.2	4.2
7	4.8	4.8
8	0	0
9	0	0
10	-19.3	-19.3
11	-15.8	-15.8
12	-28.4	-28.4
13	3.8	3.8
14	3.5	3.5
15	3.8	3.8
16	3.5	3.5
17	4.8	4.8
18	0	0
CN3014		
1	3.8	3.8
2	2.8	2.8
3	0	0
4	3.0	3.0
5	3.0	3.0
6	0	0

<SUB CPU>

MODE PIN NO.	REC	PLAY
IC3301		
1	0	4.8
2	4.8	4.8
3	0	0
4	0	0
5	0	0
6	0	0
7	4.8	4.8
8	3.5	3.5
9	4.0	4.0
10	0	0
11	4.8	4.8
12	0	0
13	4.8	4.8
14	0	0
15	2.8	2.8
16	0	0
17	4.7	4.7
18	4.8	4.8
19	4.8	4.8
20	4.8	4.8
21	0	0
22	0	0
23	4.8	4.8
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	0	0
31	0	0
32	0	0
33	0	0
34	4.8	4.8
35	4.8	4.8
36	3.9	3.9
37	3.7	3.7
38	0	3.8
39	3.7	3.7
40	4.8	0
41	4.8	0
42	4.8	0
43	0	0
44	0	0
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	0	0
54	0	0
55	0	0
56	0	0
57	0	0
58	0	0
59	4.8	4.8
60	4.8	4.8
61	0	0
62	0	0
63	0	0
64	0.1	0.1
65	0	0
66	0	0
67	0	0
68	4.8	4.8
69	-	-
70	-	-
71	0	0
72	0	0
73	4.8	4.8
74	4.8	4.8
75	0	0
76	0	0
77	0	0
78	0	0
79	2.9	2.9
80	0	0
IC3302		
1	4.8	4.8
2	4.3	4.3
3	0	0
4	4.4	3.8
5	4.4	3.8
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	2.9	2.9
13	4.8	4.8
14	2.9	2.9
15	4.3	4.3
16	4.8	4.8

<TUNER>

MODE PIN NO.	REC	PLAY
CN6701		
1	0	0
2	4.5	4.5
3	4.5	4.5
4	4.8	4.8
5	0.3	0.3
6	0.3	0.3
7	9.1	9.1
8	0	0
9	2.1	2.1

<VIDEO I/O SW>

MODE PIN NO.	REC	PLAY
IC702		
1	6.4	6.4
2	0	0
3	6.4	6.4
4	0	0
5	6.4	6.4
6	11.3	11.3
7	5.6	5.6
8	0	0
IC703		
1	3.1	3.1
2	0	0
3	3.1	3.1
4	0	0
5	3.0	3.0
6	11.4	11.4
7	3.4	3.4
8	0	0
IC705		
1	1.7	1.7
2	0	0
3	2.7	2.4
4	0	0
5	1.6	1.6
6	4.9	4.9
7	1.0	1.0
8	0	0
IC706		
1	5.6	5.6
2	4.9	4.9
3	4.9	4.9
4	0	0
5	0	0
IC707		
1	4.5	4.5
2	2.9	2.9
3	5.0	5.0
4	1.9	1.9
5	1.5	1.5
6	2.1	2.1
7	2.9	2.9
8	0	0
9	2.9	2.9
10	0	0
11	2.5	2.5
12	3.1	3.1
13	2.9	2.9
14	2.2	2.2
IC711		
1	1.4	1.4
2	0	0
3	2.0	1.8
4	4.9	4.9
5	1.4	1.4
6	4.9	0
7	0.6	0.6
8	0	0
IC712		
1	2.7	2.7
2	0	0
3	2.7	2.7
4	0	4.9
5	0	0
6	4.9	4.9
7	4.1	4.1
8	0	0
CN703		
1	0	0
2	0	0
3	0	0
4	1.7	1.7
5	0	0
6	4.1	4.1
CN704		
1	2.8	2.8
2	2.9	2.9
3	4.3	4.3
4	4.4	1.4
5	0	0
6	0	0
7	0	0
8	0	0
9	4.8	4.8
10	2.2	2.2
11	0	0
12	2.6	2.6
13	0	0
14	2.3	2.3
15	4.9	4.9
16	1.8	1.8
17	2.9	2.9
18	11.4	11.4
19	0	0
20	1.2	1.2

<AUDIO I/O>

MODE PIN NO.	REC	PLAY
IC2601		
1	0.2	0.2
2	0	0
3	0.2	0.2
4	0	0
5	0	0
6	0	0
7	0.3	0.3
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	5.6	5.6
IC2602		
1	7.5	7.5
2	7.5	7.5
3	0.2	0.2
4	-4.9	-4.9
5	0	0
6	7.5	7.5
7	7.5	7.5
8	8.2	8.2
IC2603		
1	7.0	7.0
2	7.0	7.0
3	7.0	7.0
4	7.0	7.0
5	1.4	1.4
6	0	0
7	0.3	0.3
8	0	0
9	0	0
10	0	0
11	7.0	7.0
12	7.0	7.0
13	7.0	7.0
14	1.6	1.6
15	7.0	7.0
16	5.6	5.6
IC2604		
1	7.4	7.4
2	3.0	3.0
3	0.2	0
4	0.3	0.3
5	0.2	0.3
6	3.0	3.0
7	7.4	7.4
8	8.2	8.2
IC2605		
1	7.5	7.5
2	1.5	1.5
3	0.3	0.3
4	0.3	0.3
5	0.3	0.3
6	1.5	1.5
7	0	0
8	8.2	8.2
IC2606		
1	4.5	4.5
2	7.0	7.0
3	4.6	4.6
4	0	0
5	0	0
6	0	0
7	0.3	0.3
8	0	0
9	0	0
10	0	0
11	0	0
12	4.5	4.5
13	4.5	4.5
14	0	0
15	7.0	7.0
16	5.6	5.6
IC2607		
1	0	0
2	0	0
3	0	0
4	0	0
5	4.3	4.3
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	4.3	4.3
15	0	0
16	5.6	5.6
IC2608		
1	0	0
2	0	0
3	0	0
4	0.3	0.3
5	1.2	1.2
6	1.6	3.4
7	1.6	3.5
8	8.2	8.2
IC2609		
1	8.1	8.1
2	0	0
3	8.1	8.1
4	0	0
5	4.7	4.7
6	0	0
7	4.6	4.1
8	0	0
9	5.3	5.3
10	8.2	8.2
11	5.3	5.3
12	0	0
IC2610		
1	0	0
2	4.3	4.3
3	-0.2	-0.2
4	5.6	5.6
5	5.6	5.6
6	0	0
7	0.3	0.3
8	0	0
9	0	0
10	0	0
11	0	0
12	4.3	0
13	0	0
14	4.3	4.3
15	4.3	4.3
16	5.6	5.6
CN2601		
1	0	0
2	4.2	4.2
3	0	0
4	4.2	4.2
5	0	0
6	0	0
7	0	0
8	0	0

<CONNECTION>

MODE PIN NO.	REC	PLAY
CN501		
1	2.4	2.4
2	0	0
3	2.3	2.3
4	5.0	5.0
5	2.1	2.1
6	0.3	4.5
7	3.3	3.3
8	0	0
9	2.8	2.8
10	0	0
11	4.6	4.6
12	4.2	4.2
13	0	0
14	0.8	0.8
15	2.5	2.5
16	0	0
17	2.5	2.5
CN502		
1	0.3	4.5
2	4.2	4.2
3	4.6	4.6
4	2.4	2.4
5	4.9	4.9
6	4.9	4.9
7	0	0
8	0	0
9	2.3	2.3
10	2.1	2.1
11	3.3	3.3
12	2.9	2.9
13	2.8	2.8
14	0	0
15	0	0
16	2.4	2.1
17	1.3	2.3
18	4.8	4.8
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	2.3	2.3
26	0	0
27	2.5	2.5
28	0	0
29	3.4	2.4
30	2.8	2.8
CN7501		
3	2.0	2.0
4	0	0
5	5.6	5.6
6	0	0
7	1.3	1.3
8	0	0
9	1.1	1.1
10	0	0
11	1.5	1.5
12	0	0
13	3.3	3.3
14	0	0
15	0	0
CN7502		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.7	0.7
6	0	0
7	0	0
CN7504		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.2	0.2
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
CN7506		
1	0	0
2	2.4	2.4
3	0	0
4	2.4	2.4
5	0	0
6	2.3	2.3
7	0	0
8	1.3	1.3
9	0	0
10	1.1	1.1
11	0	0
12	0.7	0.7
13	0	0
14	0.1	0.1
CN7507		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	5.0	5.0
12	5.0	5.0
13	0	0
14	0	0
15	4.9	4.9
16	4.9	4.9
CN7508		
3	31.9	31.9
4	0	0
5	0	0
6	0	0
7	11.4	11.4
8	12.2	12.2
9	-7.3	-7.3
10	4.9	4.9
11	5.0	5.0
12	43.3	43.3
13	5.6	5.6
CN7509		
1	0	0
2	22.6	22.6
3	0	0
4	4.8	4.8
5	0	0
6	4.8	4.8
7	0	0
8	-15.8	-15.8
9	-28.4	-28.4
10	-19.3	-19.3
11	0	0
12	0	0
13	11.5	11.5
14	11.6	11.6
15	12.2	12.2

<3D DIGITAL/4M>

MODE PIN NO.	REC	PLAY
IC1401	-	-
IC1402	-	-
CN1401		
1	2.4	2.4
2	0	0
3	2.3	2.3
4	5.0	5.0
5	2.1	2.1
6	0.3	4.5
7	3.3	3.3
8	0	0
9	2.8	2.8
10	0	0
11	4.6	4.6
12	4.2	4.2
13	0	0
14	0.8	0.8
15	2.5	2.5
16	0	0
17	2.5	2.5

<TERMINAL>

MODE PIN NO.	REC	PLAY
IC7101		
1	3.0	3.0
2	0	0
3	3.1	3.1
4	4.3	4.3
5	3.0	3.0
6	11.4	11.4
7	3.4	3.4
8	0	0
IC7102		
1	4.9	4.9
2	0	0
3	4.9	4.9
4	4.3	4.3
5	5.0	5.0
6	11.4	11.4
7	6.6	6.6
8	0	0
IC7103		
1	0.3	0.3
2	1.1	1.1
3	1.9	1.9
4	0	0
5	0	0
6	0	0
IC7106		
1	0.4	0.4
2	1.0	1.0
3	1.6	1.6
4	0	0
5	1.9	1.9
6	0	0
7	4.8	4.8
8	10.8	10.8
9	2.0	2.0
10	2.2	2.2
11	2.0	2.0
12	2.0	2.0
13	0	0
14	0	0
15	2.4	2.4
16	4.8	4.8
CN7101		
3	2.0	2.0
4	0	0
5	5.6	5.6
6	0	0
7	1.3	1.3
8	0	0
9	1.1	1.1
10	0	0
11	1.5	1.5
12	0	0
13	3.3	3.3
14	0	0
15	0	0
CN7102		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.7	0.7
6	0	0
7	3.3	3.3
CN7104		
1	0	0
2	0	0
3	0	0
4	0	0
5	0.2	0.2
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0

<DEMODULATOR>

MODE PIN NO.	REC	PLAY
IC1501	-	-
IC1502	-	-
IC1503	-	-
CN1501		
1	0	0
2	4.5	4.5
3	4.5	4.5
4	4.8	4.8
5	0.3	0.3
6	0.3	0.3
7	9.1	9.1
8	0	0
9	2.1	2.1

<S-SUB>

MODE PIN NO.	REC	PLAY
IC501	-	-
IC502		
1	2.0	2.0
2	0.3	4.5
3	3.3	3.3
4	3.4	3.4
5	4.9	4.9
6	2.2	2.2
7	2.0	2.0
8	4.9	4.9
9	1.4	1.4
10	2.9	2.9
11	2.9	2.9
12	2.9	2.9
13	0	0
14	2.8	2.8
15	2.8	2.8
16	1.9	1.9
17	1.9	1.9
18	1.9	1.9
CN511		
1	0.3	4.5
2	4.2	4.2
3	4.6	4.6
4	2.4	2.4
5	4.9	4.9
6	4.9	4.9
7	0	0
8	0	0
9	2.3	2.3
10	2.1	2.1
11	3.3	3.3
12	2.9	2.9
13	2.8	2.8
14	0	0
15	0	0
16	2.4	2.1
17	1.3	2.3
18	4.8	4.8
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	2.3	2.3
26	0	0
27	2.5	2.5
28	0	0
29	3.4	2.4
30	2.8	2.8
CN512		
1	0	0
2	2.4	2.4
3	0	0
4	2.4	2.4
5	0	0
6	2.3	2.3
7	0	0
8	1.3	1.3
9	0	0
10	1.1	1.1
11	0	0
12	0.7	0.7
13	0	0
14	0.1	0.1

<MDA>

MODE PIN NO.	REC	PLAY
IC5501		
1	0	0
2	1.0	1.0
3	5.0	5.0
4	1.0	1.0
5	0	0
6	4.5	4.5
7	1.0	1.0
8	0	0
9	0	0
10	0	0
11	0	0
12	6.6	6.6
13	0	0
14	0.6	0.6
15	0	0
16	0	0
17	0.5	0.5
18	5.0	5.0
19	0.5	0.5
20	4.6	4.6
21	4.6	4.6
22	4.6	4.6
23	2.6	2.6
24	2.6	2.6
25	2.6	2.6
26	2.6	2.6
27	2.6	2.6
28	2.6	2.6
29	1.6	1.6
30	2.6	2.6
31	-	-
32	2.6	2.6
33	5.1	5.1
34	0.2	0.2
35	0.5	0.5
36	0.5	0.5
37	1.2	1.2
38	1.5	1.5
39	5.1	5.1
40	0	0
41	0	0
42	3.1	3.1
43	0	0
44	3.1	3.1
45	0	0
46	0	0
47	0	0
48	0	0
49	0	0
50	0	0
51	0	0
52	0	0
53	1.6	1.6
54	1.5	1.7
55	0.5	0.5
56	3.0	3.0
57	2.2	2.2
58	0	0
59	0.7	0.7
60	0	0
61	2.6	2.6
62	2.8	2.8
63	2.3	2.3
64	2.6	2.6
65	2.5	2.5
66	2.5	2.5
67	2.5	2.5
68	1.5	1.5
69	0	0
70	1.1	1.1
71	1.1	1.1
72	1.0	1.0
73	1.1	1.1
74	2.6	2.6
75	2.6	2.6
76	2.6	2.6
77	0.8	0.8
78	4.7	4.7
79	4.7	4.7
80	4.7	4.7
IC5502	-	-
CN5501		
1	6.7	6.7
2	0	0
3	7.1	7.1
4	5.1	5.1
5	0	0
CN5502		
1	0	0
2	0	0
CN5503		
1	2.6	2.6
2	2.5	2.5
3	1.0	1.0
4	1.0	1.0
5	1.0	1.0
6	1.0	1.0
7	1.0	1.0
8	1.0	1.0
9	1.0	1.0
10	2.5	2.5
11	0	0
CN5504		
1	0.6	0.6
2	0.6	0.6
3	0.6	0.6
4	0.6	0.6
5	0.6	0.6
6	0.6	0.6
7	5.1	5.1
8	2.3	2.3
9	2.5	2.5
10	2.5	2.5
11	2.5	2.5
12	2.8	2.8
13	2.5	2.5
14	2.5	2.5
15	2.5	2.5
16	2.5	2.5
17	0	0
18	2.5	2.5
CN5505		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
CN5506		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	1.5	1.5
9	1.7	1.7
10	0	0
11	0	0
12	3.1	3.1
13	3.1	3.1
14	0	0
15	0	0
16	3.1	3.1
17	1.6	1.6
18	1.6	1.6
19	2.8	2.8
20	0	0
CN5507		
1	0	0
2	0	0
3	0	0
4	0	0

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC5001	-	-
IC5002	-	-
CN5001	-	-
CN5002		
1	0	0
2	3.1	0
3	3.1	0
4	0	3.1
5	1.5	1.5
6	0	3.1
7	0	0
8	0.7	0.7
9	1.5	1.5
10	1.1	1.1
11	2.5	1.9
12	2.5	1.3
13	1.2	1.2
14	2.5	1.3
15	2.5	1.9
16	0	0
17	0.4	0.4
18	0.5	0
19	1.4	0
20	1.2	1.2
21	0	0
22	0	0
23	3.1	3.1
24	5.1	5.1
25	3.1	3.1
26	2.5	2.5

<ON SCREEN>

MODE PIN NO.	REC	PLAY
IC851		
1	0	0
2	2.5	2.5
3	4.8	4.8
4	0	0
5	0	0
6	2.4	2.4
7	2.5	2.5
8	4.9	4.9
9	0	3.2
10	4.3	4.3
11	4.4	1.6
12	4.9	4.9
13	2.9	2.9
14	0	0
15	2.6	2.6
16	1.2	1.2
17	0	0
18	2.8	2.8
19	0	0
20	5.0	5.0
21	5.0	5.0
22	3.5	3.5
23	4.9	4.9
24	5.0	5.0
CN851		
1	2.8	2.8
2	2.9	2.9
3	4.3	4.3
4	4.4	1.4
5	0	0
6	0	0
7	0	0
8	0	0
9	4.8	4.8
10	2.2	2.2
11	0	0
12	2.6	2.6
13	0	0
14	2.3	2.3
15	4.9	4.9
16	1.8	1.8
17	2.9	2.9
18	11.4	11.4
19	0	0
20	1.2	1.2

<DISPLAY>

MODE PIN NO.	REC	PLAY
IC7001		
1	4.8	4.8
2	2.2	2.2
3	0	0
4	2.2	2.2
5	4.8	4.8
6	4.8	4.8
7	4.8	4.8
8	4.9	4.9
9	4.8	4.8
10	4.9	4.9
11	4.8	4.8
12	4.2	4.2
13	4.4	3.8
14	4.8	4.8
15	4.3	4.3
16	-28.3	-28.3
17	-28.3	-28.3
18	4.6	4.6
19	-28.1	4.6
20	4.6	-28.0
21	-23.9	-23.9
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	4.9	4.9
IC7002		
1	0	4.8
2	4.8	4.8
3	0	0
CN7001		
1	4.9	4.9
2	4.9	4.9
3	4.3	4.3
4	4.8	4.8
5	4.4	3.7
6	4.2	4.2
7	4.8	4.8
8	0	0
9	0	0
10	-19.3	-19.3
11	-15.8	-15.8
12	-28.4	-28.4
13	3.8	3.8
14	3.5	3.5
15	3.8	3.8
16	3.5	3.5
17	4.8	4.8
18	0	0
FW7003		
1	3.6	3.6
2	4.8	4.8
3	4.8	4.8
4	0	0
FW7005		
1	0	0
2	4.8	4.8

<JACK>

MODE PIN NO.	REC	PLAY
CN7002		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	5.0	5.0
12	5.0	5.0
13	0	0
14	0	0
15	4.9	4.9
16	4.9	4.9
FW7007		
1	4.9	4.9
2	4.8	4.8
3	0	0
4	0	0
5	4.7	4.7
6	4.7	4.7

<DV SYSCON>

MODE PIN NO.	REC	PLAY
IC1001		
1	0	0
2	3.1	3.1
3	0	0
4	3.0	3.0
5	1.6	1.6
6	3.1	3.1
7	3.1	3.1
8	0	0
9	2.7	2.7
10	1.2	1.2
11	1.5	1.5
12	0	0
13	1.5	1.5
14	2.7	2.7
15	1.2	1.2
16	3.1	3.1
17	1.4	1.4
18	0	0
19	0	0
20	1.1	1.1
21	1.1	1.1
22	1.2	1.2
23	0	0
24	0	0
25	3.1	3.1
26	1.6	1.6
27	0	0
28	0	0
29	3.1	3.1
30	-	-
31	-	-
32	0	0
33	0	0
34	0.2	0.2
35	3.1	3.1
36	0	0
37	0	0
38	2.5	2.5
39	0	0
40	0	0
41	0	0
42	3.1	3.1
43	0	0
44	3.1	3.1
45	0	0
46	0	0
47	0	0
48	3.1	3.1
49	3.1	3.1
50	3.1	3.1
51	1.4	1.4
52	0	0
53	0	0
54	3.1	3.1
55	0	0
56	2.6	2.6
57	3.1	3.1
58	3.0	3.0
59	0	0
60	3.1	3.1
61	3.1	3.1
62	2.7	2.7
63	2.7	2.7
64	0	0
65	0	0
66	3.1	3.1
67	3.1	3.1
68	3.1	3.1
69	0	0
70	0	0
71	0	0
72	3.1	3.1
73	0	0
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	3.1	3.1
82	0	0
83	0	0
84	0	0
85	0	0
86	3.1	3.1
87	3.1	3.1
88	0	0
89	3.1	3.1
90	0	0
91	0	0
92	0	0
93	0	0
94	3.1	3.1
95	3.1	3.1
96	3.1	3.1
97	0	0
98	3.1	3.1
99	0	0
100	3.1	3.1
101	3.1	3.1
102	3.1	3.1
103	3.1	3.1
104	3.1	3.1
105	0	0
106	0	0
107	0	0
108	3.1	3.1
109	3.1	3.1
110	3.1	3.1

MODE PIN NO.	REC	PLAY
111	0	0
112	3.1	3.1
113	3.1	3.1
114	3.1	3.1
115	3.1	3.1
116	0	0
117	0	0
118	0	0
119	3.0	3.0
120	0.2	0.2
121	3.1	3.1
122	0	0
123	3.1	3.1
124	3.1	3.1
125	0.2	0.2
126	3.1	3.1
127	0	0
128	0.2	0.2
IC1002		
1	0	0
2	0.5	0.5
3	3.1	3.1
4	0	0
5	0	0
6	2.6	2.6
7	3.1	3.1
8	3.1	3.1
IC1005		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
IC1006		
1	0	0
2	3.1	3.1
3	2.6	2.6
4	0	0
5	3.1	3.1
6	0.5	0.5
7	0.4	0.4
8	3.1	3.1
IC1007		
1	3.1	3.1
2	2.6	2.6
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	3.1	3.1
IC1008		
1	3.1	3.1
2	3.1	3.1
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	3.1	3.1
IC1009		
1	3.1	3.1
2	0	0
3	0	0
4	1.8	1.8
5	3.1	3.1
IC1010		
1	3.1	3.1
2	0	0
3	0	0
4	1.8	1.8
5	3.1	3.1
CN1001		
1	-7.2	-7.2
2	5.1	5.1
3	0	0
4	3.2	3.2
5	3.2	3.2
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0	0
10	0	0
CN1002		
1	0	0
2	3.0	3.0
3	3.0	3.0
4	0	0
5	2.8	2.8
6	3.8	3.8
CN1101		
1	0	0
2	5.1	5.1
3	3.1	3.1
4	0	0
5	3.1	3.1
6	3.1	3.1
7	3.1	3.1
8	0	0
9	1.3	1.3
10	0	0
11	1.5	1.5

MODE PIN NO.	REC	PLAY
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	3.0	3.0
18	3.1	3.1
19	3.4	3.4
20	2.7	2.7
21	0	0
22	0	0
23	2.5	1.9
24	1.6	1.6
25	0	0
26	0	0

<DV MSD>

MODE PIN NO.	REC	PLAY
IC1501		
1	0	0
2	3.1	3.1
3	3.1	3.1
4	0	0
5	0	0
6	0.2	0.2
7	3.1	3.1
8	0	0
9	0.2	0.2
10	0	0
11	0	0
12	0	0
13	0	0
14	3.1	3.1
15	0	0
16	3.1	3.1
17	2.9	2.9
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	3.1	3.1
30	3.1	3.1
31	0.2	0.2
32	0.2	0.2
33	0.4	0.4
34	0.6	0.6
35	0.6	0.6
36	0.6	0.6
37	0.6	0.6
38	0.6	0.6
39	0	0
40	0.2	0.2
41	0.2	0.2
42	0.3	0.3
43	0.2	0.2
44	0.2	0.2
45	0.3	0.3
46	0.2	0.2
47	0.5	0.5
48	3.1	3.1
49	0.4	0.4
50	2.9	2.9
51	0	0
52	3.0	3.0
53	3.1	3.1
54	0	0
55	0	0
56	3.1	3.1
57	-	-
58	0	0
59	0	0
60	3.1	3.1
61	3.1	3.1
62	1.5	1.5
63	1.1	1.1
64	3.1	3.1
65	0	0
66	3.1	3.1
67	2.7	2.7
68	0	0
69	0	0
70	3.1	3.1
71	0	0
72	3.1	3.1
73	3.1	3.1
74	0	0
75	0	0
76	0	0
77	0	3.1
78	3.1	0
79	0	3.1
80	3.1	3.1
81	0	0

MODE PIN NO.	REC	PLAY
82	3.1	3.1
83	3.1	3.1
84	3.1	3.1
85	0	0
86	0	0
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0
92	0	0
93	0	0
94	0	0
95	0	0
96	0	0
97	3.1	3.1
98	3.1	3.1
99	3.1	3.1
100	0	0
101	3.1	3.1
102	3.1	3.1
103	3.1	3.1
104	3.1	3.1
105	3.1	3.1
106	3.1	3.1
107	0	0
108	0	0
109	0	0
110	0	0
111	0	0
112	0	0
113	2.7	2.7
114	1.5	1.5
115	1.6	1.6
116	3.1	3.1
117	0	0
118	0	0
119	0	0
120	0.2	0.2
121	0.3	0.3
122	3.1	3.1
123	3.1	3.1
124	3.1	3.1
125	0	0
126	0	0
127	3.1	3.1
128	0	0
129	0	0
130	3.1	3.1
131	0	0
132	0	0
133	0	0
134	0	0
135	3.1	3.1
136	1.6	1.6
137	0	0
138	0	0
139	1.9	1.9
140	1.5	1.5
141	0	0
142	1.5	1.5
143	0	0
144	0	0
145	0	0
146	1.6	1.6
147	1.7	1.7
148	0.3	0.3
149	1.5	1.5
150	1.6	1.6
151	3.1	3.1
152	-	-
153	-	-
154	1.6	1.6
155	1.6	1.6
156	1.6	1.6
157	0	0
158	1.5	1.5
159	0.2	0.2
160	0	0
161	0.2	0.2
162	0	0
163	0	0
164	0	0
165	0	0
166	3.1	3.1
167	0	0
168	0	0
169	0.2	0.2
170	3.1	0
171	0	0
172	0	0
173	3.1	3.1
174	3.1	3.1
175	3.0	0.3
176	0.2	0.2
177	0	0
178	3.1	3.1
179	3.1	3.1
180	3.1	3.1
181	3.1	3.1
182	0	0

MODE PIN NO.	REC	PLAY
183	2.7	2.7
184	5.1	5.1
185	0	0
186	0	0
187	0.2	0.2
188	3.1	0
189	0.2	0.2
190	3.1	3.1
191	3.1	3.1
192	3.1	3.1
193	0	0
194	3.1	3.1
195	2.3	2.3
196	3.1	3.1
197	1.4	1.4
198	0	0
199	3.1	3.1
200	0	0
201	2.8	2.8
202	2.8	2.8
203	0	0
204	3.1	3.1
205	3.1	3.1
206	3.1	3.1
207	3.1	3.1
208	0	0.3
IC1502		
1	-	-
2	3.1	3.1
3	-	-
4	0	0
5	-	-
6	0.1	0.1
7	-	-
8	3.1	3.1
IC1601		
1	3.1	3.1
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	3.1	3.1
8	3.1	3.1
CN1501		
1	3.1	3.1
2	3.1	3.1
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	1.5	1.5
9	1.7	1.7
10	0	0
11	0	0
12	3.1	3.1
13	3.1	3.1
14	0	0
15	0	0
16	3.1	3.1
17	1.6	1.6
18	1.6	1.6
19	2.8	2.8
20	0	0
CN1502		
1	0	0
2	3.1	3.1
3	0	0
4	1.2	1.2
5	-	-
6	3.1	3.1
7	1.2	1.2
8	-	-
9	3.1	3.1
10	3.1	3.1
11	0	0
12	0	0
13	3.1	3.1
14	0	0
15	0	0

<DV MAIN>

MODE PIN NO.	REC	PLAY
IC2001	-	-
IC2002		
1	0	0.4
2	0	0.4
3	0	0
4	1.4	1.4
5	0.1	0
6	3.1	0
7	0	0
8	2.9	2.9
IC2003		
1	3.1	3.1
2	0	0

MODE PIN NO.	REC	PLAY
3	1.2	1.2
4	2.5	2.5
5	3.1	3.1
IC2004		
1	5.1	5.1
2	0	0
3	1.2	1.2
4	2.9	2.9
5	5.1	5.1
IC2007		
1	3.1	3.1
2	0.9	0.9
3	0	0
4	0	0
5	0	0
6	1.4	1.4
7	2.4	2.4
8	3.1	3.1
CN2001		
1	0	0
2	3.1	0
3	3.1	0
4	0	3.1
5	1.5	1.5
6	0	3.1
7	0	0
8	0.7	0.7
9	1.5	1.5
10	1.1	1.1
11	2.5	1.9
12	2.5	1.3
13	1.2	1.2
14	2.5	1.3
15	2.5	1.9
16	0	0
17	0.4	0.4
18	0.5	0
19	1.4	0
20	1.2	1.2
21	0	0
22	0	0
23	3.1	3.1
24	5.1	5.1
25	3.1	3.1
26	2.5	2.5

<DV I/O>

MODE PIN NO.	REC	PLAY
IC3001		
1	0	0
2	3.0	3.0
3	1.1	1.1
4	0.5	0.5
5	0.8	0.8
6	1.6	1.6
7	0.5	0.5
8	1.0	1.0
9	0	0
10	2.9	2.9
11	1.7	1.1
12	1.1	0.5
13	0	0
14	3.0	3.0
15	1.4	1.4
16	0.4	0.4
17	2.4	2.4
18	1.3	1.3
19	0	0
20	0	0
21	0	0
22	0	0
23	1.8	1.8
24	3.1	3.1
25	1.6	1.6
26	1.0	0
27	1.0	0
28	0.9	0
29	1.5	1.3
30	0	0
31	3.1	3.1
32	1.7	1.3
33	1.0	0
34	0.7	0
35	0.5	0
36	3.1	3.1
37	1.5	1.5
38	1.0	1.0
39	1.0	1.0
40	0.9	0.9
41	1.5	1.5
42	1.7	1.7
43	1.1	1.1
44	0.8	0.8
45	0.6	0.6
46	0	0
47	0	0
48	0	0
49	3.1	3.1
50	3.1	3.1
51	2.7	2.7

MODE PIN NO.	REC	PLAY
52	0	0
53	1.8	1.8
54	1.6	1.6
55	3.1	3.1
56	3.1	3.1
57	0	0
58	0	0
59	2.9	2.9
60	3.1	3.1
61	1.5	1.5
62	0	0
63	3.1	3.1
64	0	0
65	0	0
66	0	0
67	0	0
68	0	0
69	0	0
70	0	0
71	0	0
72	0	0
73	3.0	3.0
74	1.1	1.1
75	3.0	3.0
76	0.8	0.8
77	1.7	1.7
78	3.0	3.0
79	1.1	1.1
80	0.9	0.9
IC3101		
1	0	0
2	-	-
3	0	0
4	1.4	1.4
5	3.1	3.1
IC3102		
1	0	0
2	1.4	1.4
3	0	0
4	1.6	1.6
5	3.1	3.1
IC3151		
1	0	0
2	2.3	2.3
3	1.4	1.4
4	0.7	0.7
5	1.5	1.5
6	1.7	1.7
7	2.0	2.0
8	3.0	2.1
9	0	0
10	3.0	3.0
11	3.0	3.0
12	0	0
13	0	0
14	1.6	1.6
15	0	0
16	3.1	3.1
17	3.1	3.1
18	1.2	1.2
19	1.2	1.2
20	0	0

<DV V OUT>

MODE PIN NO.	REC	PLAY
IC3501		
1	1.7	1.7
2	1.8	1.8
3	1.3	1.3
4	1.1	1.1
5	0	0
6	0	0
7	0	0
8	0	0
9	2.6	2.6
10	2.4	2.4
11	1.6	1.6
12	1.9	1.9
13	0	0
14	2.0	2.0
15	5.1	5.1
16	3.0	3.0
17	0	0
18	2.0	2.0
19	1.8	1.8
20	1.8	1.8
IC3502		
1	5.1	5.1
2	0	0
3	1.2	1.2
4	3.0	3.0
5	5.1	5.1
CN3501		
1	0	0
2	0	0
3	0	0
4	1.7	1.7
5	0	0
6	4.1	4.1

<AUDIO AD/DA>

MODE PIN NO.	REC	PLAY
IC3701		
1	3.1	3.1
2	3.1	3.1
3	1.6	1.6
4	2.9	2.9
5	0.6	0.6
6	1.6	1.6
7	3.1	3.1
8	3.1	3.1
9	1.5	1.5
10	1.5	1.5
11	1.5	1.5
12	1.5	1.5
13	0	0
14	3.1	3.1
15	1.4	1.4
16	3.1	3.1
17	0	0
18	3.1	3.1
19	1.6	1.6
20	1.6	1.6
21	1.6	1.6
22	0	0
23	3.1	3.1
24	3.1	3.1
IC3702		
1	0	0
2	0	0
3	0	0
4	-6.0	-6.0
5	0	0
6	0	0
7	0	0
8	5.1	5.1
IC3703		
1	0	0
2	0	0
3	0	0
4	-6.0	-6.0
5	0	0
6	0	0
7	0	0
8	5.1	5.1
CN3701		
1	0	0
2	4.2	4.2
3	0	0
4	4.2	4.2
5	0	0
6	0	0
7	0	0
8	0	0

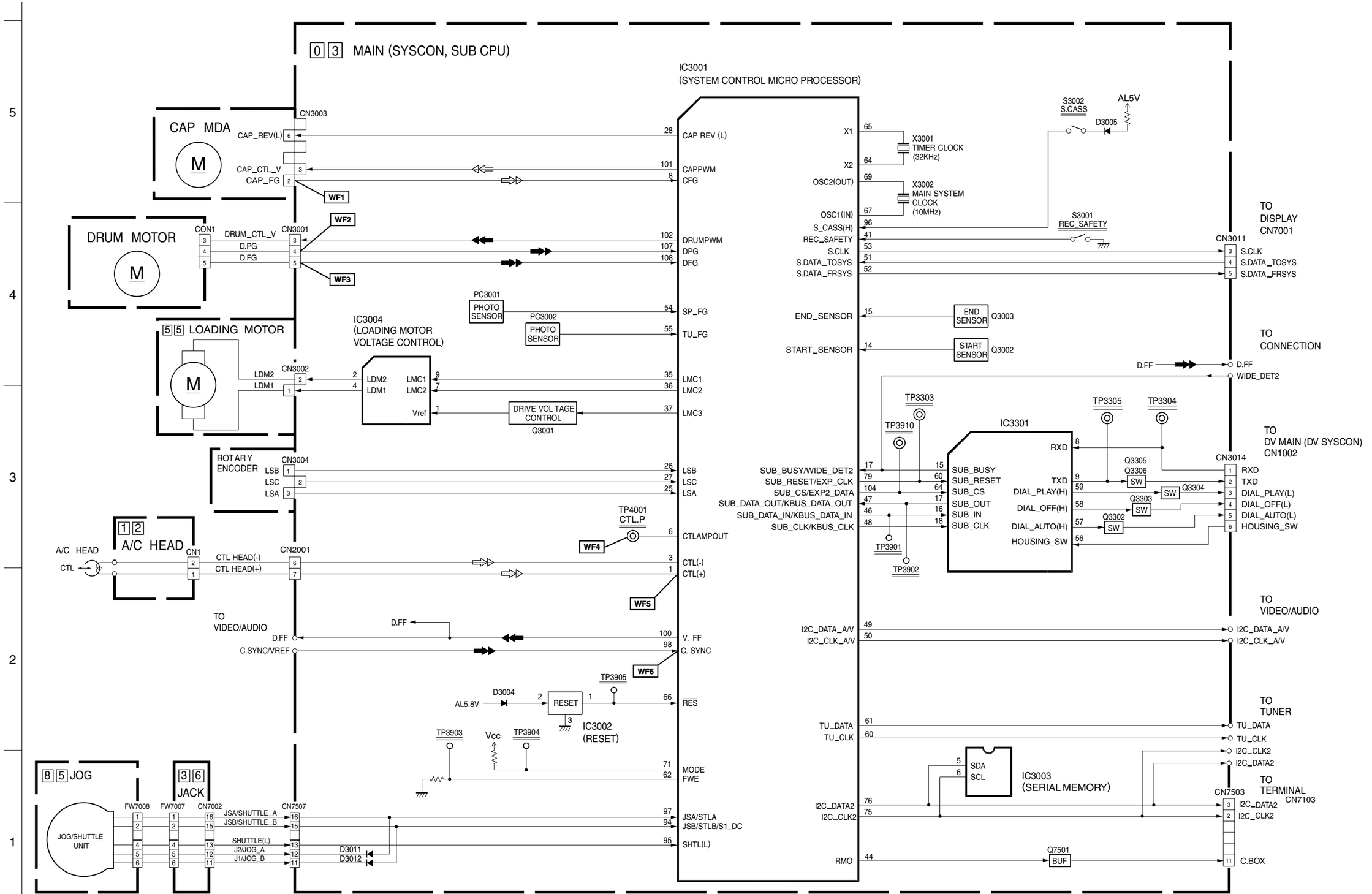
4.36 CPU PIN FUNCTION

<SYSCON IC3001>

PIN NO.	LABEL	IN/OUT	FUNCTION
1	CTL(+)	IN/OUT	CTL(+) SIGNAL
2	SVSS	-	GND
3	CTL(-)	IN/OUT	CTL(-) SIGNAL
4	CTLBIAS	-	CTL BIAS VOLTAGE
5	CTLFB	IN	CTL PULSE FEEDBACK
6	CTLAMPOUT	OUT	CTL PULSE OUTPUT
7	CTLSMTIN	IN	CTL PULSE INPUT
8	CFG	IN	CAPSTAN FG PULSE INPUT
9	SVCC	-	SYSTEM POWER
10	AVCC	-	SYSTEM POWER FOR ANALOG CIRCUIT
11	NORM/MESEC/S	IN	SVHS MODE:H
12	SECAM_DET(H)/KILLER_DET/BIT_IN(H)	IN	NC/COLOR KILLER DETECT/NC
13	PAUSE	IN	PAUSE CONTROL
14	START_SENSOR	IN	START SENSOR
15	END_SENSOR	IN	END SENSOR
16	TU_SYNC	-	NC
17	SUB_BUSY/WIDE_DET2	IN	SERIAL TRANSMISSION SIGNAL FOR SUB CPU/NC
18	RF_AGC/LED	IN	CHANGES IN ATS+IC OUTPUT AS CAUSED BY CHANGES IN RECEIVER SENSITIVITY WHEN THE SAME CHANNEL IS RECEIVED MORE THAN ONCE ARE INPUT./NC
19	SCR_ID(H)/WIDE_DET	IN	SCRAMBLECONTROL INPUT (SCRAMBLE:H)/NC
20	BS_ANT/AFC	IN	NC/TUNING CLOCK
21	VIDEO_ENV	IN	AUTO TRACKING DETECT/INPUT THE AVERAGE OF PLAYBACK VIDEO SIGNAL
22	A.ENV/ND(L)	IN	AUDIO PB FM ENV.INPUT/NON HiFi MODE:L
23	AVSS	-	GND FOR ANALOG CIRCUIT
24	CTL_GAIN	OUT	CONTROL AMP OUT FREQUENCY RESPONSE SWITCHING
25	LSA	IN	MECHANISM MODE DETECT(A)
26	LSB	IN	MECHANISM MODE DETECT(B)
27	LSC	IN	MECHANISM MODE DETECT(C)
28	CAP_REV(L)	OUT	CAPSTAN MOTOR REVERSE CONTROL (FWD:H/REV:L)
29	RC	IN	REMOTE CONTROL DATA INPUT
30	LOCK(L)	IN	TUNING PLL LOCK DETECT:L
31	P50_IN	IN	CONTROL SIGNAL FOR TV LINK
32	ET_PB(H)/AGC_CTL	IN	NC
33	FRONT(H)/EXP1_DATA	OUT	FRONT INPUT:H/NC
34	P50_OUT/M_PULSE	OUT	CONTROL SIGNAL FOR TV LINK/NC
35	LMC1	OUT	LOADING MOTOR DRIVE(1)
36	LMC2	OUT	LOADING MOTOR DRIVE(2)
37	LMC3	OUT	LOADING MOTOR DRIVE(3)
38	SB_G(PWM)	OUT	VOLTAGE CONTROL SIGNAL FOR VIDEO FREQUENCY RESPONSE
39	STB/TEST	OUT	STROBE SIGNAL (FOR FDP DRIVER)
40	POWER_DET	IN	DETECTION SIGNAL FOR POWER DOWN OF AC POWER SUPPLY
41	REC_SAFETY	IN	REC SAFETY SWITCH DETECT (SW ON:L)
42	PROTECT	IN	DETECTION SIGNAL FOR SW POWER SUPPLY
43	VSS	-	GND
44	RMO/ANT_CTL(H)	OUT	REMOTE CONTROL OUTPUT FOR SATELLITE RECEIVER/NC
45	VCC	-	SYSTEM POWER
46	SUB_DATA_IN/KBUS_DATA_IN	IN/OUT	SERIAL DATA TRANSFER INPUT FOR SUB CPU/NC
47	SUB_DATA_OUT/KBUS_DATA_OUT	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR SUB CPU/NC
48	SUB_CLK/KBUS_CLK	OUT	SERIAL DATA TRANSFER CLOCK FOR SUB CPU/NC
49	I2C_DATA_A/V	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR THE VIDEO/AUDIO IC
50	I2C_CLK_A/V	OUT	SERIAL DATA TRANSFER CLOCK FOR THE VIDEO/AUDIO IC
51	S.DATA_TOSYS	IN	SERIAL DATA TRANSFER OUTPUT FROM THE ON-SCREEN IC TO THE FDP DRIVER
52	S.DATA_FRSYS	OUT	SERIAL DATA TRANSFER OUTPUT FROM THE FDP DRIVER TO THE ON-SCREEN IC
53	S.CLK	OUT	SERIAL DATA TRANSMISSION CLOCK FROM THE FDP DRIVER TO THE ON-SCREEN IC
54	SP_FG	IN	DETECTION SIGNAL FOR SUPPLY REEL ROTATION/TAPE REMAIN
55	TU_FG	IN	DETECTION SIGNAL FOR TAKE-UP REEL ROTATION/TAPE REMAIN
56	JUST/EDS(H)/SECAM	IN	NC

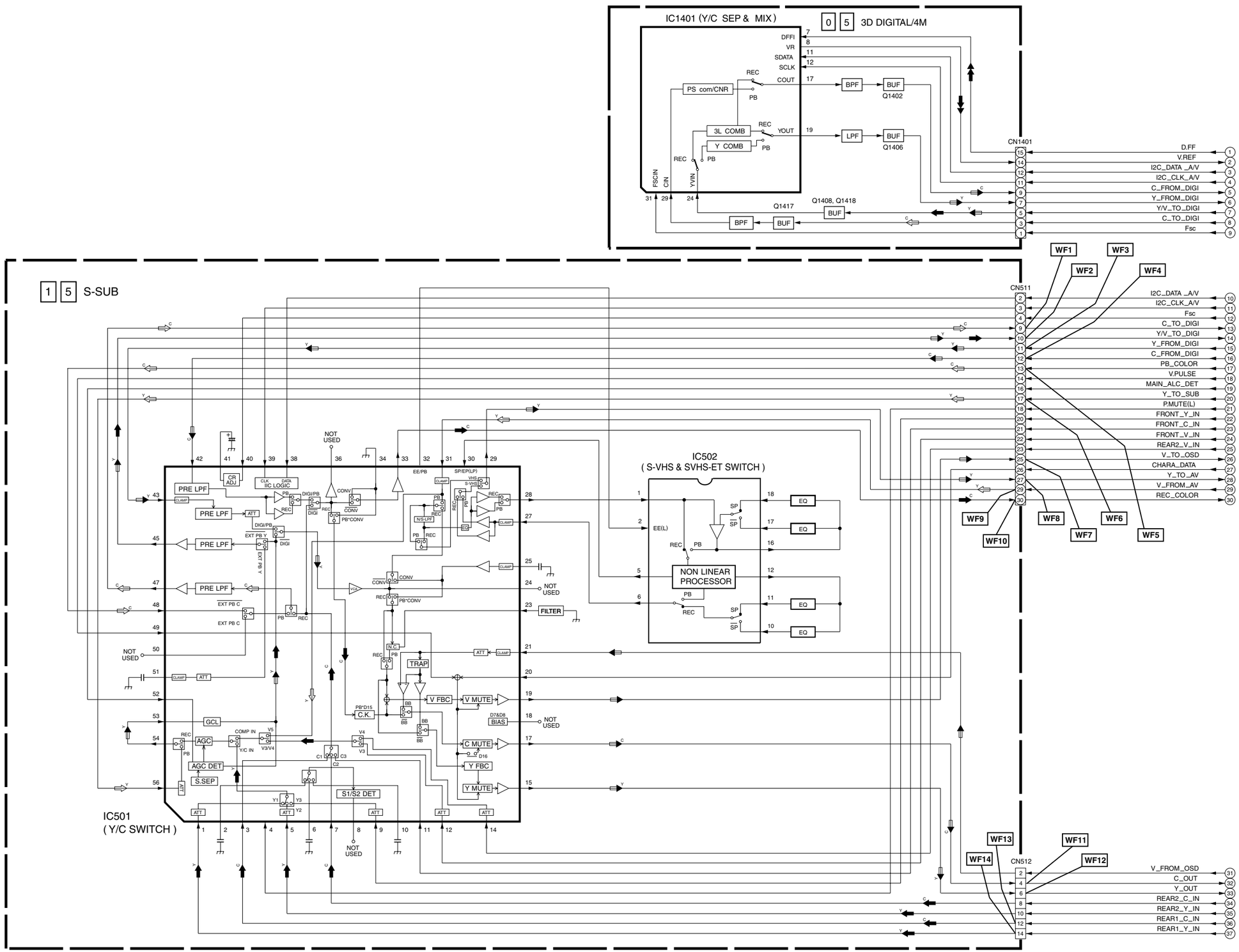
PIN NO.	LABEL	IN/OUT	FUNCTION
57	TU_CE	OUT	CHIP ENABLE OF THE TUNER UNIT
58	N.REC_ST(H)	OUT	NORMAL AUDIO SOUND RECORDING START
59	SP_CONV/BS/KBUS_REQ	IN	AUDIO INPUT SWITCHING FOR DV
60	TU_CLK	OUT	CLOCK FOR DATA TRANSFER TO THE TUNER UNIT
61	TU_DATA	OUT	TUNING DATA
62	FWE	-	NC
63	NMI(L)	-	NC
64	X2	-	TIMER CLOCK (32.768KHz)
65	X1	-	TIMER CLOCK (32.768KHz)
66	RES(L)	-	RESET TERMINAL (RESET ON:L)
67	OSC1(IN)	-	MAIN SYSTEM CLOCK(10MHz)
68	VSS	-	GND
69	OSC2(OUT)	-	MAIN SYSTEM CLOCK(10MHz)
70	VCC	-	SYSTEM POWER
71	MODE	-	NC
72	TU_A_MUTE(H)	OUT	TUNER AUDIO MUTE CONTROL (MUTE:H)
73	TU_V_MUTE(H)	OUT	TUNER VIDEO CONTROL (MUTE:H)
74	A.MUTE(H)	OUT	AUDIO MUTE CONTROL (MUTE:H)
75	I2C_CLK2	OUT	SERIAL DATA TRANSFER CLOCK FOR MEMORY IC
76	I2C_DATA2	IN/OUT	SERIAL DATA TRANSFER OUTPUT FOR MEMORY IC
77	DV_A.MUTE/FF/REW(L)	OUT	DV AUDIO MUTE CONTROL (MUTE:H)/NC/NC
78	DV_P.MUTE(H)	OUT	DV PICTURE MUTE CONTROL (MUTE:H)
79	SUB_RESET/EXP_CLK	OUT	SUB CPU RESET/NC
80	V.P.CTL	OUT	V.PULSE CONTROL, V COMPENSATION DURING SPECIAL PLAYBACK
81	EDS_CS/PAL.PB(H)	OUT	NC/PLAYBACK MODE FOR PAL:H
82	VCC	-	SYSTEM POWER
83	SLOW_P/CNR_CTL	OUT	MEMORY TIMING CONTROL IN THE SLOW MODE / NC
84	VSS	-	GND
85	SP_SHORT(H)	OUT	MODE SELECT
86	LP_SHORT(H)	OUT	MODE SELECT
87	FLY_ON(H)/VHS(H)	OUT	FLYING ERASE ON:H/NC
88	H.REC_ST(H)	OUT	HIFI AUDIO SOUND RECORDING START
89	TRICK(H)/M_TRICK(L)	OUT	SPECIAL PLAYBACK: H/REC AFC FILTER, PB APC FILTER, BURST ACC FILTER, COLOR KILLER DET FILTER
90	B.BACK(H)/P.SAVE(L)	OUT	BLUE BACK MODE:H/NC
91	OSD_CS	OUT	CHIP SELECT FOR THE ON-SCREEN IC
92	SYNC_DET(H)	IN	DETECTION OF VIDEO SYNC SIGNAL (DETECTED:H)
93	BS_P.CTL(H)/MESECAM(H)	OUT	NC/MESECAM:H
94	JSB/STLB/S1_DC	IN	INPUT FOR THE JOG SHUTTLE/NC
95	SHTL(L)/JOGA	IN	INPUT FOR THE JOG SHUTTLE
96	S_CASS(H)	IN	DETECTION SIGNAL FOR S VHS CASSETTE(S VHS:H)
97	JSA/STLA	IN	INPUT FOR THE JOG SHUTTLE
98	C.SYNC	IN	COMPOSITE SYNC
99	A.FF	OUT	AUDIO FF OUTPUT
100	V.FF	OUT	ROTATION DETECTION SIGNAL FOR DRUM MOTOR/TIMING CONTROL SIGNAL FOR REC
101	CAPPWM	OUT	CAPSTAN MOTOR CONTROL
102	DRUMPWM	OUT	DRUM MOTOR CONTROL
103	SUB_OSD_ON/V_UP(H)	OUT	OSD IC CONTROL FOR MULTI DUBBING DISPLAY MODE:H/NC
104	SUB_CS/EXP2_DATA	OUT	TRANSMISSION START SIGNAL TO SUB CPU/NC
105	SP(H)	-	NC
106	P.MUTE(L)	OUT	PICTURE CONTROL (MUTE:L)
107	DPG	IN	DRUM PICKUP PULSE INPUT (SWITCHING PULSE)
108	DFG	IN	DRUM FG PULSE INPUT
109	VCC	-	SYSTEM POWER
110	V.PULSE	OUT	V.PULSE ADDITION TIMING CONTROL
111	VSS	-	GND
112	CTLREF	-	CTL REFERENCE VOLTAGE

4.37 SYSTEM CONTROL BLOCK DIAGRAM (VHS)



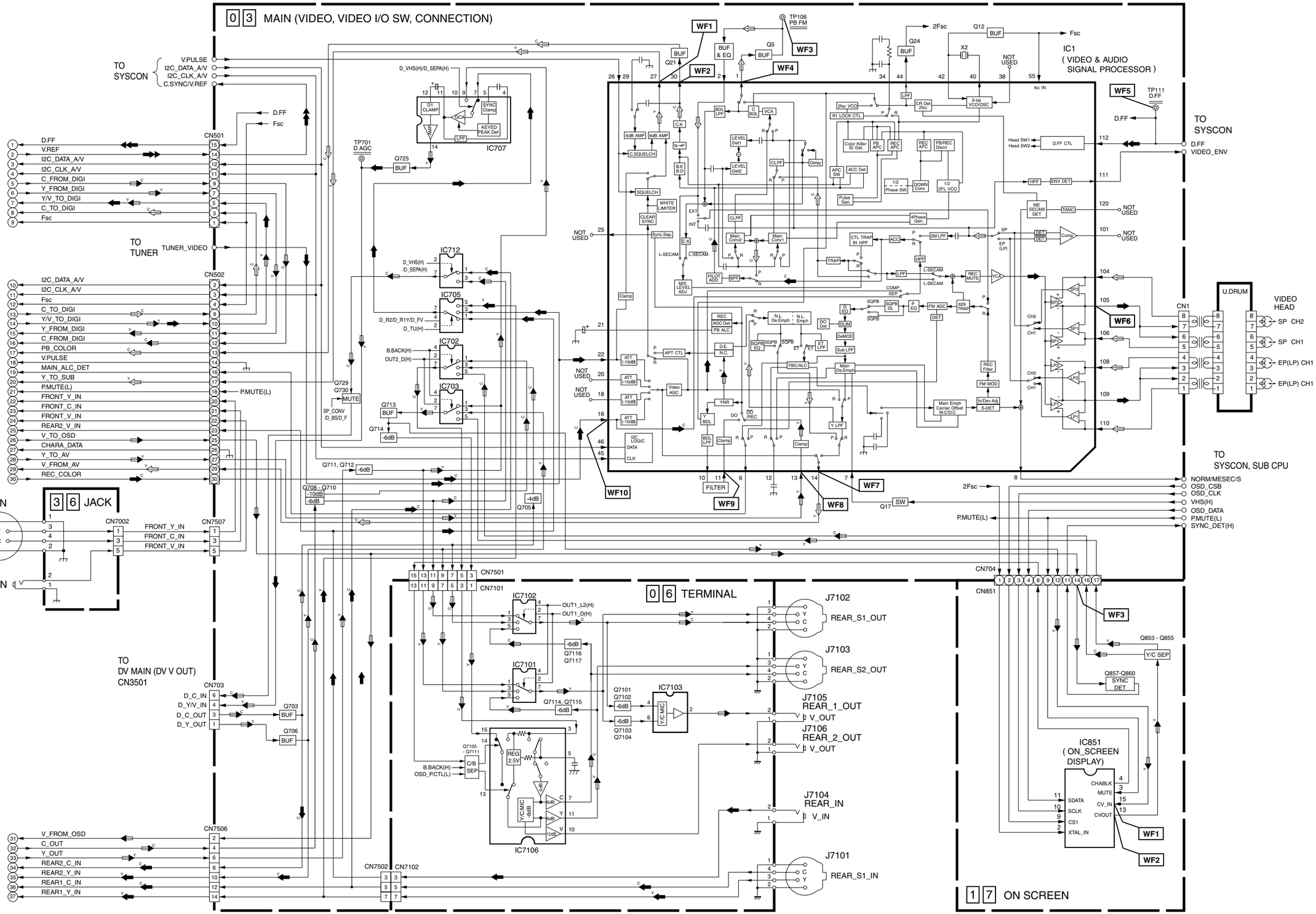
NOTES : For the waveforms in this block diagram, refer to page 4-71.

4.38 VIDEO BLOCK DIAGRAM (VHS)



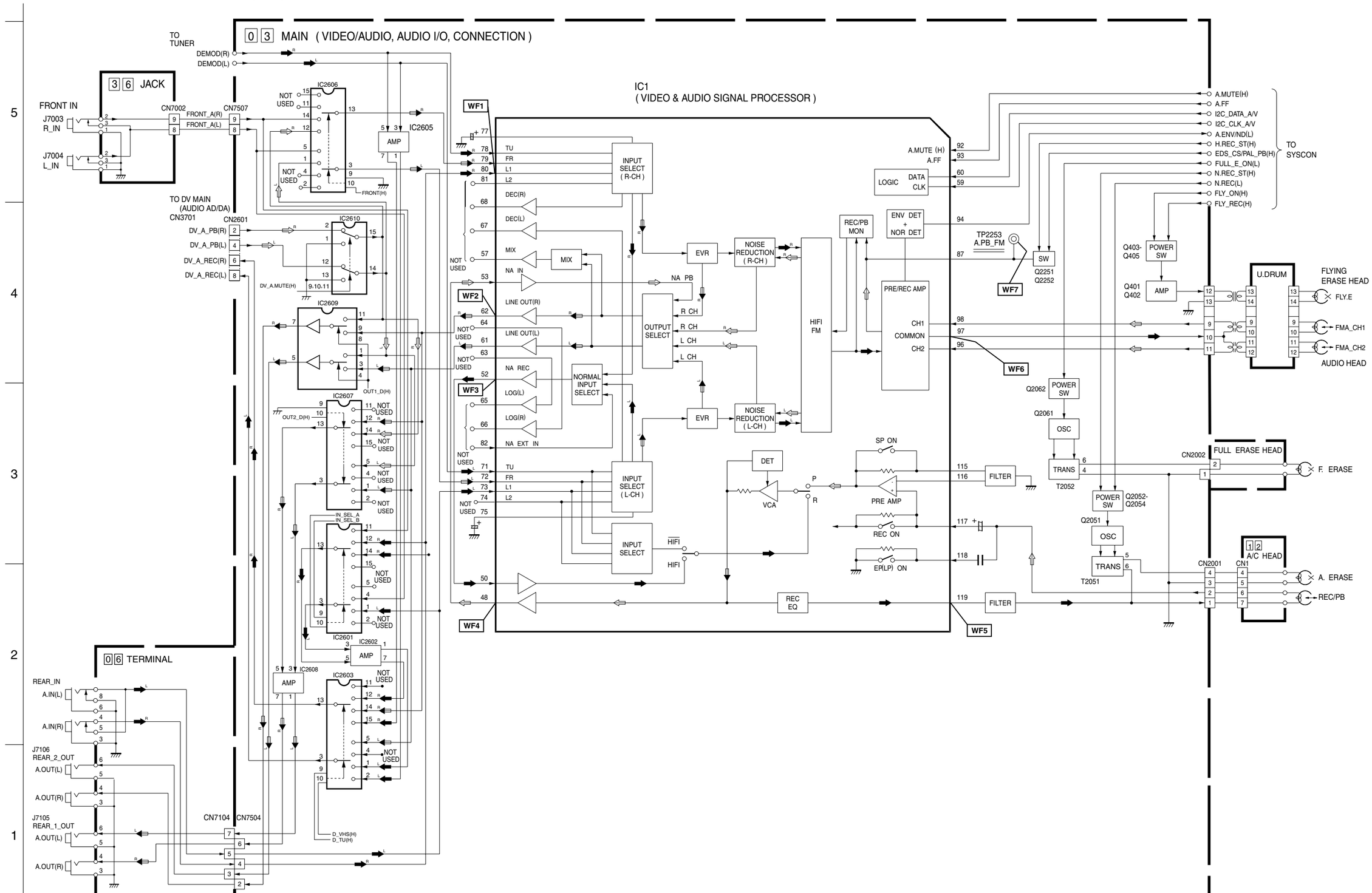
NOTES : For the waveforms in this block diagram, refer to page 4-71.

0 3 MAIN (VIDEO, VIDEO I/O SW, CONNECTION)



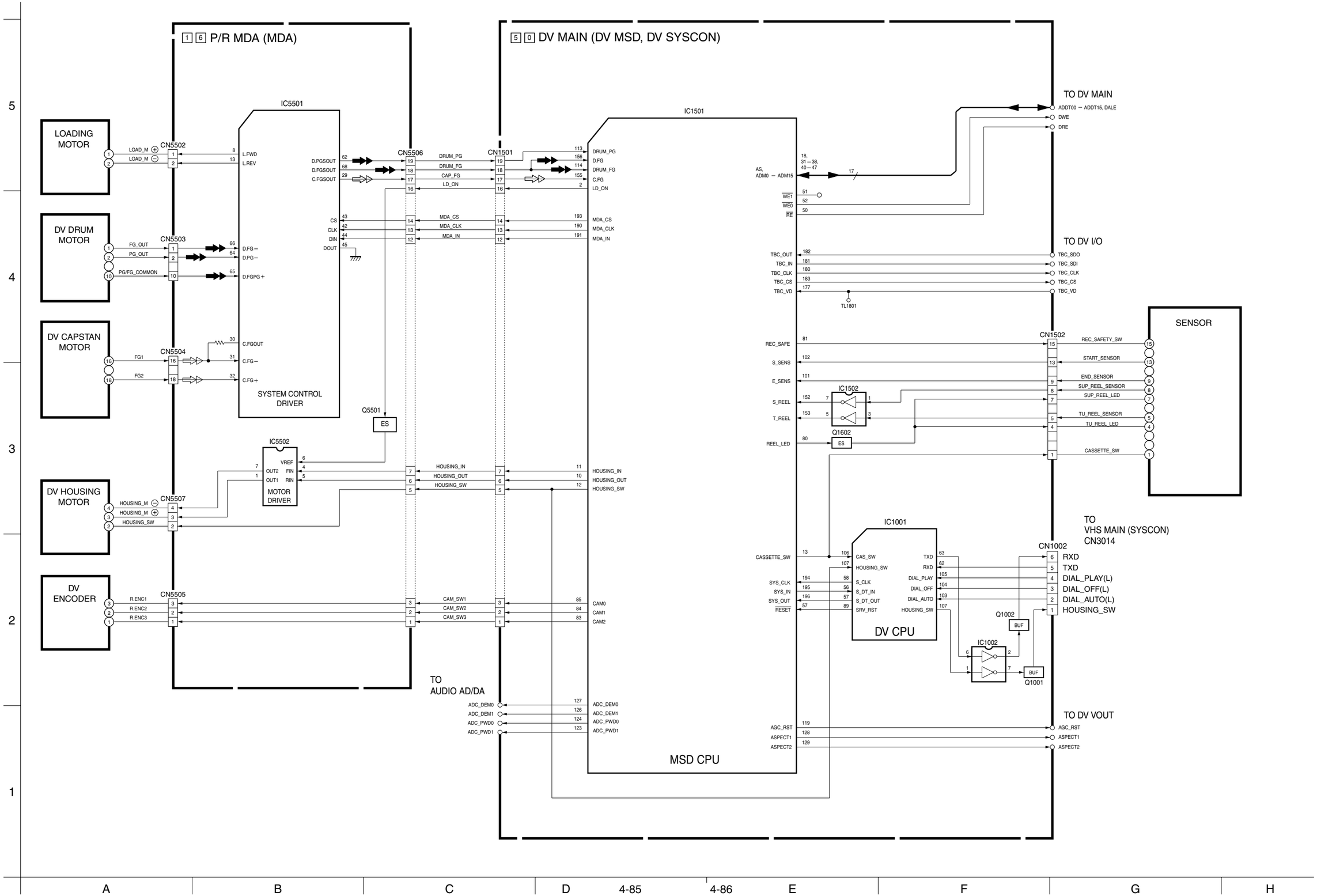
NOTES : For the waveforms in this block diagram, refer to page 4-71.

4.39 AUDIO BLOCK DIAGRAM (VHS)

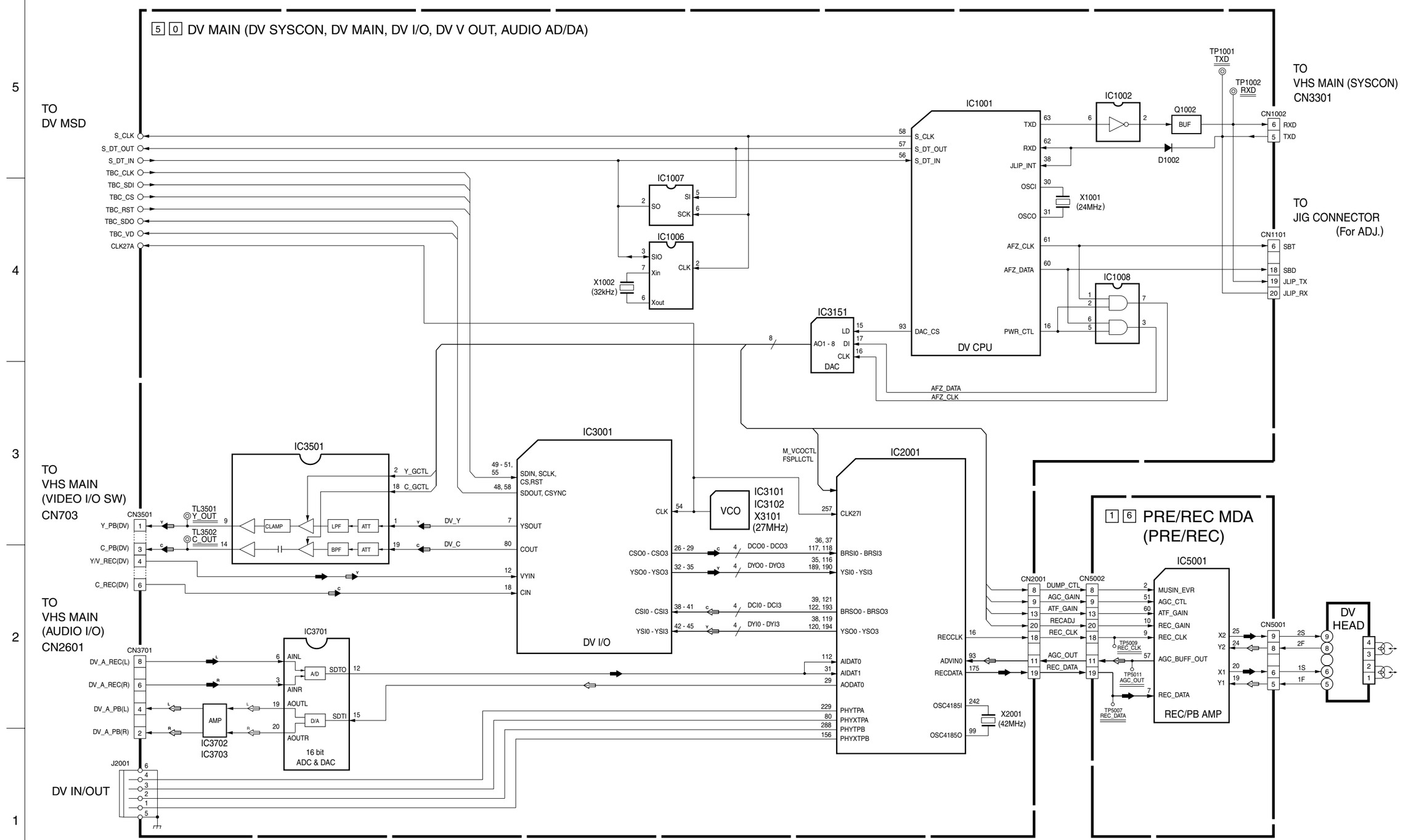


NOTES : For the waveforms in this block diagram, refer to page 4-71.

4.40 SYSTEM CONTROL BLOCK DIAGRAM (DV)



4.41 VIDEO BLOCK DIAGRAM (DV)



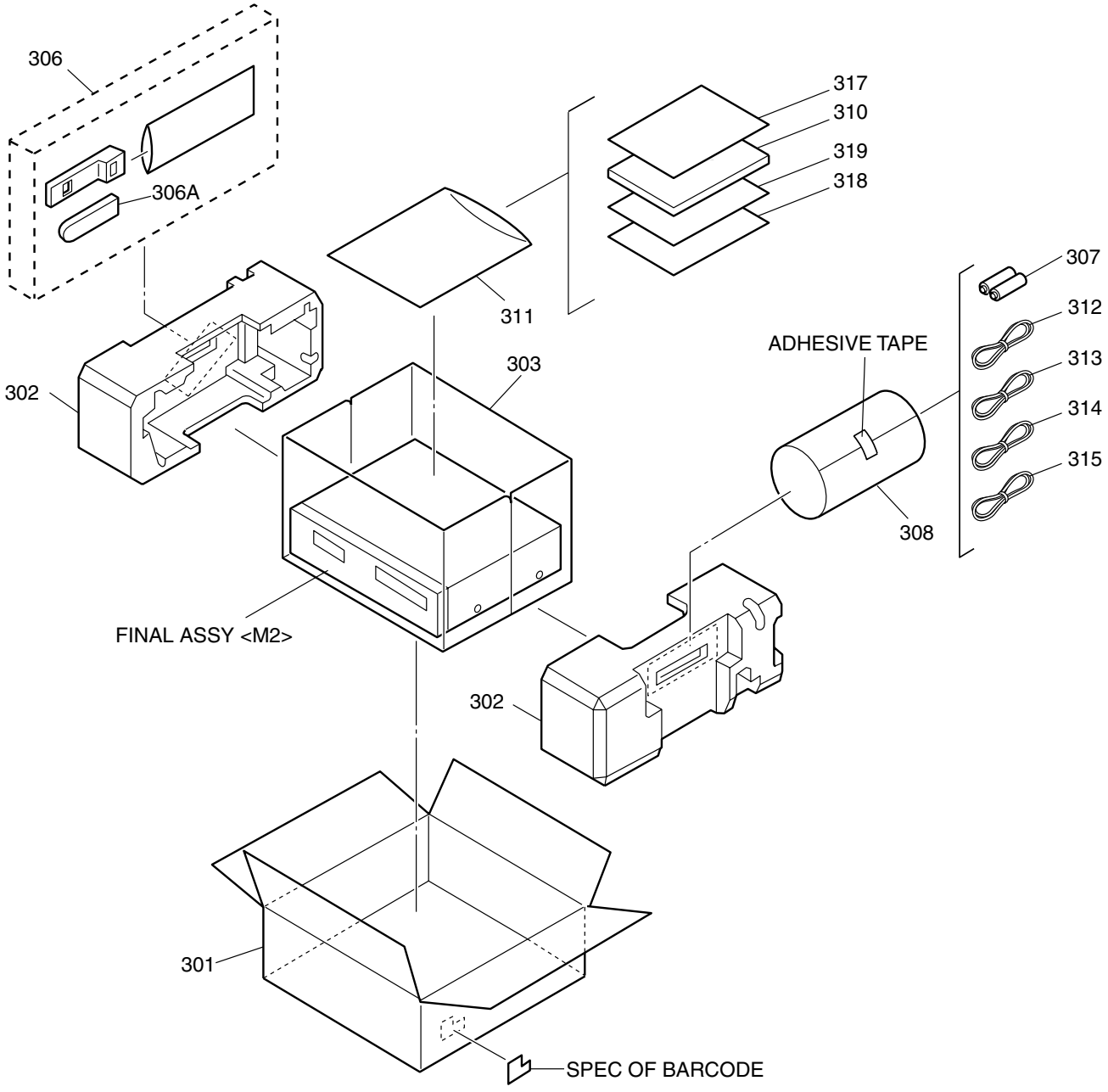
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING AND ACCESSORY ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.

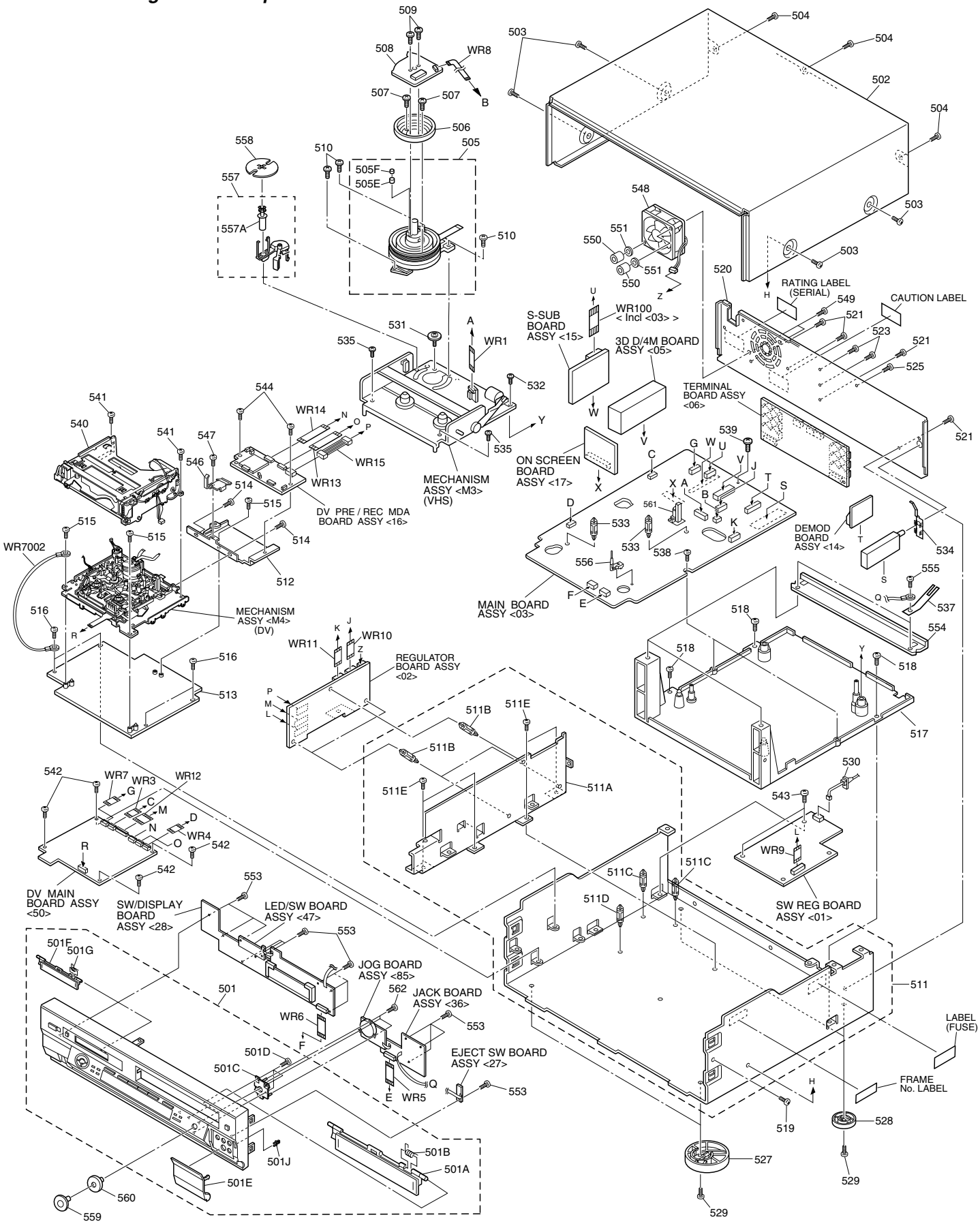


#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
**********				
			PACKING AND ACCESSORY ASSEMBLY <M1>	
		301	LP30850-003A	PACKING CASE
		302	LP30868-001B	CUSHION ASSY
		303	PQM30021-95	POLY BAG
		306	LP20465-012A	REMOTE CONTROLLER
		306A	LP40254-009A	COVER(BATTERY)
		307	–	BATTERY,X2("AA"TYPE)
		308	QPC02202230P	POLY BAG
	⚠	310	LPT0575-002A	INST.BOOK(FR)
	⚠		LPT0575-001A	INST.BOOK(EN)
		311	QPC02503530P	POLY BAG
		312	PEAC0294-04	RF CABLE
		313	QAL0095-005	LED CABLE ASSY (Satellite Controller)
		314	QAM0310-001	CABLE ASSY(AUDIO/VIDEO)
		315	QAM0004-002	S CABLE
		317	BT-51020-2	REGIST.CARD
		318	BT-20071B	SER.NET CARD
		319	PU36560	CONECTION SHEET

5.2 FINAL ASSEMBLY <M2>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.

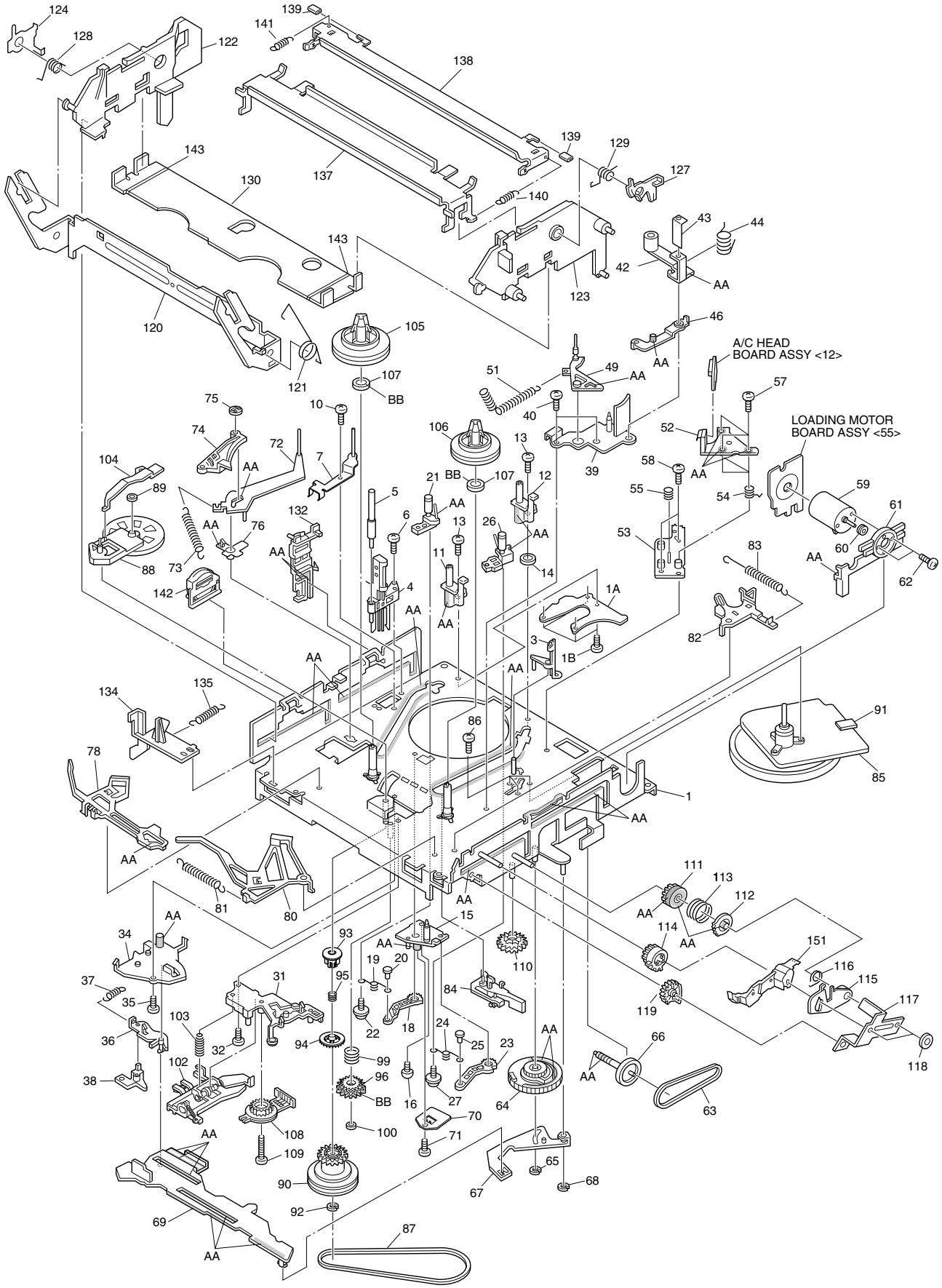


#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
**********				

FINAL ASSEMBLY <M2>

⚠	501	LP10331-009A	FRONT PANEL ASSY
	501A	LP20968-002A	CASSETTE DOOR,VHS
	501B	PQ46448	TORSION SPRING,VHS
	501C	LP30757-001A	BASE(J/S)
	501D	QYTDSF2608Z	SCREW,X3
	501E	LP30763-009A	DOOR(JACK)
	501F	LP30756-001A	CASSETTE DOOR(DV)
	501G	LP40688-001A	SPRING(DV)
	501J	PU60109	CATCHER
⚠	502	LP10128-006A	TOP COVER
	503	QYTDST3006R	SCREW,X4 TOP COVER(SIDE)
	504	QYTDST3006M	SCREW,X3 TOP COVER(REAR)
	505	LP20617-008A	DRUM SUB ASSY
	505E	LP40323-001A	CONTACT
	505F	LP30004-014A	COMPRESSION SPRING
	506	PDZ0179-1-4	ROTOR ASSY
	507	QYSPSP3006Z	SCREW,X2
⚠	508	QAR0119-001	STATOR ASSY
	509	QYSPSPH2606Z	SCREW,X2
	510	QYTDST2610Z	SCREW,X3 DRUM
⚠	511	LP10156-003B	BOTTOM CHASSIS ASSY
	511A	LP10130-002B	BRACKET(1)
	511B	PEME0834	SPACER (BOARD),X3
	511C	LP40696-001A	HOLDER(BOARD),X2
	511D	LP40696-002A	HOLDER(BOARD)
	511E	QYTDST3006Z	SCREW,X4
	512	LP30352-001B	BRACKET(DV),MECHA
	513	LP20359-001B	BASE(2),DV MECHA
	514	QYTDST2004Z	SCREW,X2 DV MECHA
	515	QYTDSF2606Z	SCREW,X3 DV MECHA
	516	QYTDST3006Z	SCREW,X4 BASE(2)
	517	LP20939-001C	BASE(1),VHS
	518	QYTDST3006Z	SCREW,X3 BASE(1)
	519	QYTDSF3010Z	SCREW,BOTTOM CHASSIS
⚠	520	LP10339-003A	REAR COVER
	521	QYTDST3006M	SCREW,X4 REAR COVER
	523	QYTDSF3008M	SCREW,X2 RCA
	525	QYTDSF3008M	SCREW,S JACK
	527	PQ46617C	FOOT ASSY,X2
	528	PQ35504	FOOT(2),X2
	529	QYTDST3006Z	SCREW,X4
⚠	530	QMPD190-170-K	POWER CORD
	531	PQ40413	SPECIAL SCREW,VHS MECHA
	532	QYTDSF4012Z	SCREW,MECHA
	533	LP40226-001A	PC SUPPORT,X2
	534	PQ21623-2-5	EARTH PLATE(RF)
	535	QYTDSF3010Z	SCREW,X2 VHS MECHA
	537	PQ41556	EARTH PLATE
	538	QYTDSF3010Z	SCREW,X2 VHS MAIN
	539	QYTDST3006Z	SCREW,VHS MAIN
	540	LY30428-004A	CASSETTE HOUSING ASSY,DV
	541	QYTDSP2004Z	SCREW,X2
	542	QYTDST3006Z	SCREW,X4 DV MAIN
	543	QYTDST3006Z	SCREW,X2 SW.RWG
	544	QYTDST3006Z	SCREW,X2 PRE/REC MDA
	546	LP30553-001A	EARTH PLATE
	547	QYTDST2004Z	SCREW,DV CASS.HOUSING
	548	QAR0121-001	FAN MOTOR
	549	QYTDSP4030M	SCREW,X2
	550	QYNNS4000Z	NUT,X2
	551	QYWLS4277A0Z	SPRING WASHER,X2
	553	QYTDSF2606Z	SCREW,X13 FRONT
	554	LP30312-001B	BRACKET(CHASSIS)
	555	QYTDSF3010Z	SCREW,X2
	556	LP40407-001A	KNOB ASSY
	557	LP40370-001E	ROLLER ARM ASSY
	557A	PDM4311A-1	ROLLER ASSY
	558	PQ44230	INERTIA PLATE
	559	LP30760-001B	KNOB(JOG)
	560	LP30761-001C	KNOB(SHUTTLE)
	561	LP40253-001B	STOPPER
	562	QYTDSF2606Z	SCREW,X3 JOG
	WR1	WJT0005-002A	E-CARD WIRE,A/C HEAD CN2001
	WR3	QUQ210-0830CC	FFC WIRE,DV MAIN CN2601
	WR4	QUQ210-0620CC	FFC WIRE,DV MAIN CN3014
	WR5	QUQ112-1610CG	FFC WIRE,FRONT CN7507
	WR6	QUQ112-1810CG	FFC WIRE,FRONT CN3011
	WR7	QJN019-063411	SHI CR C-C WIRE,DV MAIN CN703
	WR8	QUQ212-0516CG	FFC WIRE,DRUM CN3001
	WR9	QUQ212-1910CG	FFC WIRE,SW/REG CN5301
	WR10	QUQ212-1128CG	FFC WIRE,REG CN7508
	WR11	QUQ212-1336CG	FFC WIRE,REG CN7509
	WR12	QJJ001-101400	SIN CR C-C WIRE,DV MAIN CN532
	WR13	QUQ105-2010AA	FFC WIRE,DV PRE/REC CN1501
	WR14	QUQ105-2610AA	FFC WIRE,DV PRE/REC CN2001
	WR15	QJJ001-051100	SIN CR C-C WIRE,DV PRE/REC CN5324
	WR7002	QUB220-05XLXL	SIN TWIST WIRE

5.3 MECHANISM ASSEMBLY (VHS) <M3>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	COSMO-HV56	BB

NOTE: This section indicates that the grease and oil are to be applied on locations marked with **AA** and **BB**.
During checking and servicing, check if grease has been applied on the locations marked with **AA** and oil on the locations marked with **BB**.

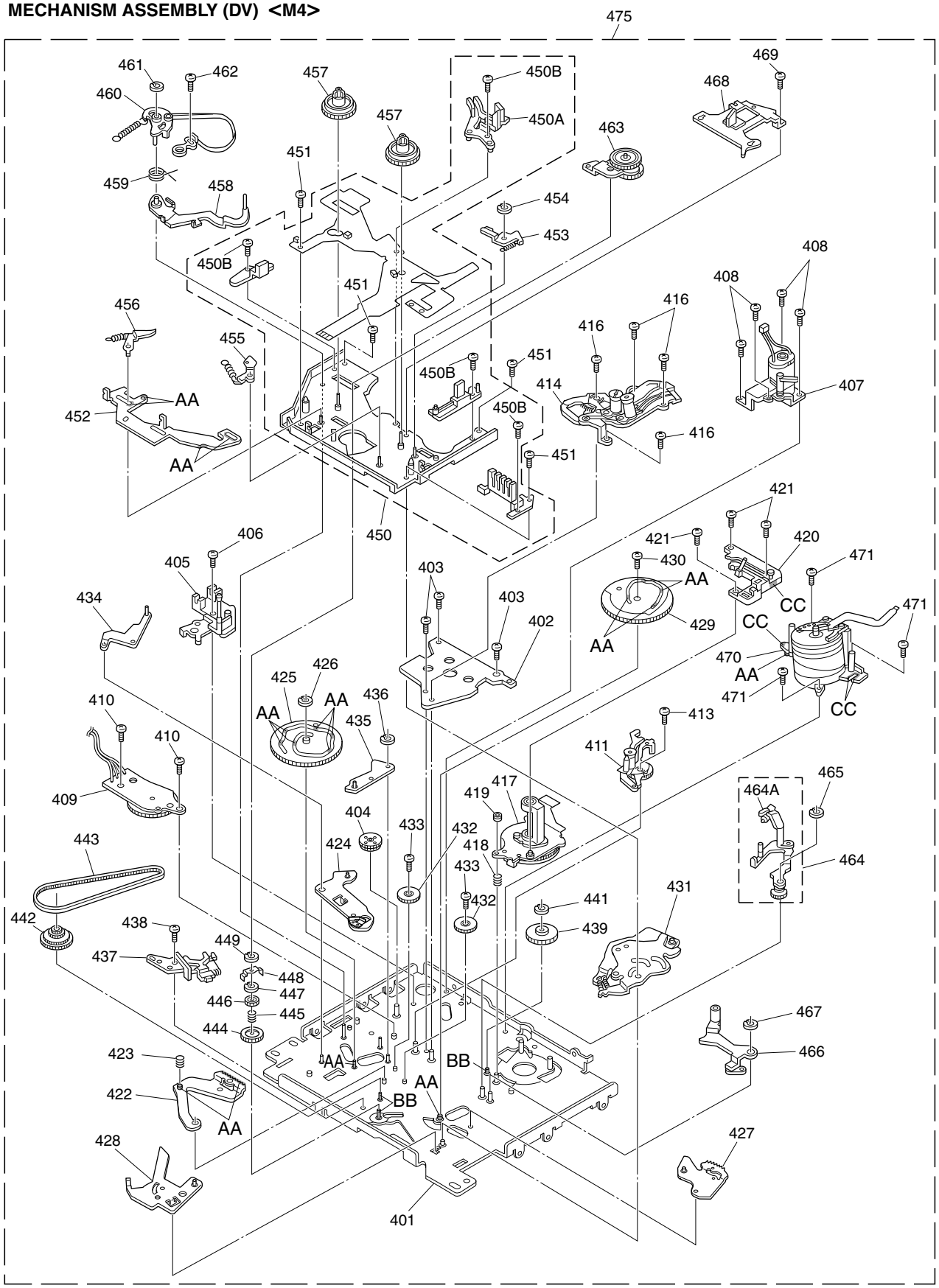
#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

MECHANISM ASSEMBLY(VHS) <M3>

		1	LP20821-002F	MAIN DECK ASSY
		1A	LP40275-004B	PLATE(SUPPLY)
		1B	QYTDST2605Z	SCREW,X4
		3	LP30492-002B	GIDE POLE GUARD
		4	NAH0001-001	FULL ERASE HEAD
		5	LP40098-001B	GUIDE POLE(SUPPLY)
		6	QYTDST2608Z	SCREW
		7	LP40637-002A	TENSION STUD BASE ASSY
		10	QYTDST2606Z	SCREW
		11	LP30409-002C	UV CATCHER 2(SUPPLY)
		12	LP30409-002C	UV CATCHER 2(TAKE UP)
		13	QYTPST2606Z	SCREW,X2
		14	PQ40919-10	SPACER
		15	LP30223-003C	LOADING ARM GEAR SHAFT
		16	QYTDST2606Z	SCREW
		18	LP30224-001B	LOADING ARM GEAR(SUPPLY)
		19	LP40099-001A	TORSION ARM
		20	LP40100-001A	PIN
		21	LP40101-006A	POLE BASE ASSY(SUPPLY)
		22	QYSPSTG2606Z	SCREW
		23	LP40103-002B	LOADING ARM GEAR(TAKE UP)
		24	LP40099-001A	TORSION ARM
		25	LP40100-001A	PIN
		26	LP40104-006A	POLE BASE ASSY(TAKE UP)
		27	QYSPSTG2606Z	SCREW
		31	LP20233-004B	ROTARY ENCODER GUIDE
		32	QYTPST2606Z	SCREW
		34	LP30226-004E	CONTROL PLATE GUIDE
		35	QYTPST2605Z	SCREW
		36	LP30249-003B	TAKE UP LEVER
		37	LP30003-006A	TENSION SPRING
		38	LP40119-002A	T.UP HEAD
		39	LP20234-004B	LID GUIDE
		40	QYTDST2606Z	SCREW,X2
		42	LP40105-003A	PINCH ROLLER ARM ASSY
		43	LP40753-001A	PINCH ROLLER SHEET 3
		44	LP40148-002A	TORSION SPRING
		46	LP40149-001C	PRESS LEVER ASSY
		49	LP40106-007A	GUIDE ARM ASSY
		51	LP40134-001C	TENSION SPRING
		52	QAH0010-004	AC HEAD
		53	LP30228-001A	HEAD BASE
		54	LP30004-013A	COMPRESSION SPRING,X3
		55	LP40236-001A	COMPRESSION SPRING
		57	LP40213-002B	SPECIAL SCREW,X3
		58	QYTDST2608Z	SCREW,X2
		59	QAR0023-001	LOADING MOTOR
		60	PQ43546-1-2	MOTOR PULLEY
		61	LP30230-001B	MOTOR GUIDE
		62	QYTPSP3003Z	SCREW,X2
		63	LP30005-003A	BELT,LOADING MOTOR
		64	LP20791-002D	CONTROL CAM
		65	PQM30017-24	SLIT WASHER
		66	LP40120-001A	WORM GEAR
		67	LP40107-002A	LINK LEVER ASSY
		68	PQM30017-24	SLIT WASHER
		69	LP10284-002E	CONTROL PLATE
		70	LP40379-001B	CONTROL BRACKET(1)
		71	QYTDSF2608M	SCREW
		72	LP40108-002A	TENSION ARM ASSY
		73	LP30003-010A	TENSION SPRING
		74	LP40109-003D	TENSION BRAKE ASSY
		75	PQ46302-1-3	ADJUST PIN
		76	LP30232-002A	TENSION ARM BEARING
		78	LP40532-009B	MAIN BRAKE ASSY (SUPPLY)
		80	LP40111-014C	MAIN BRAKE ASSY (TAKE UP)
		81	LP30003-029A	TENSION SPRING
		82	LP40112-001F	SUB BRAKE ASSY(TAKE UP)
		83	LP40357-001B	TENSION SPRING
		84	LP40461-001A	CAPSTAN BRAKE ASSY
		85	QAR0132-001	CAPSTAN MOTOR
		86	QYTDSF2606M	SCREW,X3
		87	LP30005-008A	BELT,CAPSTAN MOTOR
		88	LP40114-011B	IDLER ARM ASSY
		89	LP30016-001A	SLIT WASHER
		90	LP40593-003B	CLUTCH UNIT 3
		91	LP30002-097A	SPACER
		92	PQM30017-47	SLIT WASHER
		93	LP30696-002A	CLUTCH GEAR 4
		94	LP30697-003A	COUPLING GEAR
		95	LP40554-002A	COMPRESSION SPRING
		96	LP40442-001A	DIRECT GEAR
		99	LP40483-002A	COMPRESSION SPRING
		100	LP30016-001A	SLIT WASHER
		102	LP40484-003B	CHANGE LEVER ASSY
		103	LP40512-002B	COMPRESSION SPRING
		104	LP30236-002C	IDLER LEVER
		105	LP20237-003B	REEL DISK ASSY(SUPPLY)
		106	LP20238-003B	REEL DISK ASSY(TAKE UP)
		107	LP30017-015A	SPACER,X2
		108	QSW0554-003	ROTARY ENCODER
		109	LP40746-001A	SPECIAL SCREW
		110	LP30237-002B	CASSETTE GEAR
		111	LP30239-002G	LIMIT GEAR(1)
		112	LP30240-002G	LIMIT GEAR(2)
		113	LP40136-001E	TORSION SPRING
		114	LP30242-002A	RELAY GEAR
		115	LP30339-002E	OPENER GUIDE
		116	LP40545-001A	TORSION SPRING
		117	LP40214-001B	C.H.BRACKET
		118	PQM30017-47	SLIT WASHER,X2
		119	LP30243-001D	DRIVE GEAR
		120	LP20240-001G	DRIVE ARM
		121	LP40137-001A	TORSION SPRING
		122	LP10081-002L	SIDE HOLDER(L)
		123	LP10082-002M	SIDE HOLDER(R)
		124	LP30255-006A	LOCK LEVER(L)
		127	LP30256-001H	LOCK LEVER(R)
		128	LP40168-003A	TORSION SPRING(L)
		129	LP40218-001B	TORSION SPRING(R)
		130	LP30257-001G	CASSETTE HOLDER
		132	LP30244-002G	GUIDE RAIL
		134	LP30245-002F	REC SAFETY LEVER
		135	LP30003-004A	TENSION SPRING
		137	LP20578-001C	TOP GUIDE
		138	LP30500-001C	HOLD PLATE
		139	LP40450-003A	PAD,X2
		140	LP30003-025B	TENSION SPRING
		141	LP30003-024A	TENSION SPRING
		142	LP40481-003A	ROLLER CAM ASSY
		143	LP30019-014A	PAD,X2
		151	LP20324-003B	DOOR OPENER

5.4 MECHANISM ASSEMBLY (DV) <M4>



Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB
Grease	RX-410R	CC

NOTES: • This section indicates that the grease and oil are to be applied on locations marked with **AA**, **BB** and **CC**.
During checking and servicing, check if grease has been applied on the locations marked with **AA**, **CC** and oil on the locations marked with **BB**.
• Apply also grease and oil on some locations in the main cam gear and the cam groove at the rear side of the sub cam gear.

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

MECHANISM ASSEMBLY(DV) <M4>

		401	LY10062-001B	MAIN DECK ASSY
		402	LY30358-001A	DRUM BASE DECK
		403	YQ43893	MINI SCREW,X3
		404	LY30343-001A	WORM WHEEL 2
		405	LY40237-001C	ENT.GUIDE BASE ASSY
		406	YQ43893	MINI SCREW
		407	LY30340-001C	MOTOR BRACKET ASSY
		408	YQ43893	MINI SCREW,X4
		409	LY41190-001B	ROTARY ENCODER ASSY
		410	YQ43893	MINI SCREW,X2
		411	YQ31873B-30	GUIDE RAIL ASSY(SUPPLY)
		413	YQ43893	MINI SCREW
		414	LY20097-001C	GUIDE RAIL ASSY(TAKE UP)
		416	YQ43893	MINI SCREW,X4
		417	QAR0012-002	CAPSTAN MOTOR
		418	LY30002-003A	COMPRESSION SPRING
		419	LY41390-001A	ADJUST NUT
		420	LY30345-001A	MIDDLE CATCHER ASSY
		421	YQ43893	MINI SCREW,X3
		422	LY40223-001A	ARM GEAR 1 ASSY
		423	LY40224-001A	COLLAR
		424	LY40235-002B	CENTERRING ARM ASSY
		425	LY10060-002A	MAIN CAM
		426	YQ44246	SLIT WASHER
		427	LY40279-001A	ARM GEAR 2 ASSY
		428	LY40228-001A	CLUTCH LOCK LEVER ASSY
		429	LY20102-001A	SUB CAM
		430	YQ43893	MINI SCREW
		431	LY30347-001A	CHARGE ARM ASSY
		432	YQ44560-1-2	CONNECT GEAR 2
		433	YQ43893	MINI SCREW,X2
		434	LY40236-001A	TENSION CONTROL ARM ASSY
		435	LY40233-001A	BRAKE CONTROL ARM ASSY
		436	YQ44246	SLIT WASHER
		437	LY40242-001C	BASE PLATE ASSY
		438	YQ43893	MINI SCREW
		439	YQ43931A	REEL DRIVE PULLEY ASSY
		441	YQ44246	SLIT WASHER
		442	LY40239-001B	CENTER GEAR ASSY
		443	LY40241-001A	TIMING BELT
		444	LY40246-001A	CLUTCH LOCK GEAR (1)
		445	LY30002-009A	COMPRESSION SPRING
		446	LY40247-001A	CLUCH LOCK GEAR (2)
		447	YQ43933-2	WASHER
		448	LY40248-001A	PUSH PLATE
		449	YQ44246	SLIT WASHER
		450	LYH30012-001B	SUB DECK ASSY(G)
		450A	LY20108-001B	PRISM
		450B	YQ43893	MINI SCREW
		451	YQ43893	MINI SCREW,X4
		452	LY20109-001B	CONTROL PLATE
		453	LY40257-001A	SUB BRAKE ASSY
		454	YQ44246	SLIT WASHER
		455	LY40259-001A	MAIN BRAKE ASSY(TAKE UP)
		456	LY40260-001B	MAIN BRAKE ASSY(SUPPLY)
		457	LY40255-001A	REEL DISK ASSY,X2
		458	LY41245-001B	TENSION ARM SUB ASSY
		459	LY41243-001A	TORSION SPRING
		460	LY41246-001C	BAND ARM PLATE SUB ASSY
		461	YQ44246-3	SLIT WASHER
		462	YQ43893-7	MINI SCREW
		463	LY30370-001F	SWING ARM ASSY
		464	LY30380-001D	EXIT GUIDE ARM ASSY
		464A	LY41250-001A	CLEANER ARM ASSY
		465	YQ44246	SLIT WASHER
		466	LY30374-001B	PINCH ROLLER ARM ASSY
		467	YQ44246	SLIT WASHER
		468	LY40280-001B	REEL COVER ASSY
		469	YQ43893	MINI SCREW
		470	YDV2089B	DRUM ASSY
		471	YQ43893	MINI SCREW,X3
		475	YMA0024D	MECHA ASSY(A)

5.5 ELECTRICAL PARTS LIST

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
**********				
			SW REGULATOR BOARD ASSEMBLY <01>	
		PW1	LPA10119-04A1	SW.REG BOARD ASSY
		IC5101	STR-F6552	IC
		IC5301	L5431	IC
			or MM1431AT	IC
		Q5301	2SD1819A/RS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SC4081/RS/-X	TRANSISTOR
		Q5302	DTA114EU	TRANSISTOR
			or PDTA114EU	TRANSISTOR
			or RN2302	TRANSISTOR
			or UN5111	TRANSISTOR
		D5001	RBV-404	DIODE
		D5101	AU01	FR DIODE
			or ERA18-04-T2	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS4	FR DIODE
		D5102	AU01Z	FR DIODE
			or ERA18-02-T2	FR DIODE
			or PG104RS	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS2	FR DIODE
		D5103	1SS133	DIODE
			or 1SS270A	DIODE
		D5104	AU01	FR DIODE
			or ERA18-04-T2	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS4	FR DIODE
		D5201	AK04	DIODE
			or 1S4	SB DIODE
			or 11EQS04	SB DIODE
		D5202	FML-12S	FR DIODE
			or FCF06A20	FR DIODE
			or ER602FCT	FR DIODE
			or SF5LC20U	FR DIODE
			or YG901C2	FR DIODE
		D5204	1SR153-400-T2	FR DIODE
			or PG104RS	FR DIODE
			or 10ELS2	FR DIODE
			or ERA18-02-T2	FR DIODE
		D5206	FMB-24	BARRIER DIODE
			or FSQ05A04B	SB DIODE
			or SB640FCT	SB DIODE
			or SF5SC4	SB DIODE
			or YG801C04	SB DIODE
		D5207	FMB-24	BARRIER DIODE
			or FSQ05A04B	SB DIODE
			or SB640FCT	SB DIODE
			or SF5SC4	SB DIODE
			or YG801C04	SB DIODE
		D5208	AK04	DIODE
			or 1S4	SB DIODE
			or 11EQS04	SB DIODE
		D5210	AU01Z	FR DIODE
			or PG104RS	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS2	FR DIODE
			or ERA18-02-T2	FR DIODE
		D5211	AU01Z	FR DIODE
			or ERA18-02-T2	FR DIODE
			or PG104RS	FR DIODE
			or 1SR153-400-T2	FR DIODE
			or 10ELS2	FR DIODE
		D5301	MTZJ15A	ZENER DIODE
			or RD15ES/B1/-T2	ZENER DIODE
		D5303	MTZJ7.5A	ZENER DIODE
			or RD7.5ES/B1/-T2	ZENER DIODE
		D5304	1SS133	DIODE
			or 1SS270A	DIODE
		D5305	MTZJ27C	ZENER DIODE
			or RD27ES/B3/-T2	ZENER DIODE
		D5306	MTZJ2.7B	ZENER DIODE
			or RD2.7ES/B2/-T2	ZENER DIODE
		D5307	1SS133	DIODE
			or 1SS270A	DIODE
		D5308	1SS133	DIODE
			or 1SS270A	DIODE
		D5310	1SS133	DIODE
			or 1SS270A	DIODE
		D5311	1SS133	DIODE
			or 1SS270A	DIODE
		D5312	1SS133	DIODE
			or 1SS270A	DIODE
	⚠	R5001	QRZ9046-475Z	RESISTOR 4.7MΩ,1/2W
		R5101	QRG02GJ-683	OMF RESISTOR 68kΩ,2W
		R5102	QRE141J-1R0Y	RESISTOR 1Ω,1/4W
		R5103	NRSA02J-332X	MG RESISTOR 3.3kΩ,1/10W
		R5104	QRE141J-681Y	RESISTOR 680Ω,1/4W
		R5105	QRT01DJ-R47X	MF RESISTOR 0.47Ω,1W
		R5106	QRG02GJ-683	OMF RESISTOR 68kΩ,2W
		R5302	NRSA02J-472X	MG RESISTOR 4.7kΩ,1/10W
		R5303	NRVA02D-123X	CMF RESISTOR 12kΩ,1/10W
		R5304	NRVA02D-302X	CMF RESISTOR 3kΩ,1/10W
		R5305	NRSA02J-223X	MG RESISTOR 22kΩ,1/10W
	⚠	R5306	QRZ9005-470X	FUSI RESISTOR 47Ω,1/4W
		R5307	NRSA02J-221X	MG RESISTOR 220Ω,1/10W
		R5308	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		R5309	NRSA02J-122X	MG RESISTOR 1.2kΩ,1/10W
		R5310	QRL02DJ-821X	OMF RESISTOR 820Ω,2W
		R5311	NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
		R5313	NRSA02J-561X	MG RESISTOR 560Ω,1/10W
		R5314	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
		R5316	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
		R5317	NRSA02J-333X	MG RESISTOR 33kΩ,1/10W
		B5001	QUY160-100Y	IM BUS WIRE
		B5002	QUY160-100Y	IM BUS WIRE
		B5003	QUY160-100Y	IM BUS WIRE
	⚠	C5001	QFZ9073-683	F CAPACITOR 0.068μF,250V
	⚠	C5002	QFZ9051-223	F CAPACITOR 0.022μF,250V
	⚠	C5004	QCZ9094-472	CAPACITOR 0.0047μF,125V
		C5006	QEZ0516-337	E CAPACITOR 330μF,200V
		C5102	QEMU1VM-276	E CAPACITOR 27μF,35V
		C5103	QCZ0136-471Z	CAPACITOR 470pF,1kV
		C5104	QFLC1HJ-471Z	F CAPACITOR 470pF,50V
		C5105	NCB21EK-333X	CAPACITOR 0.033μF,25V
		C5106	QCZ0212-472	CAPACITOR 0.0047μF,1kV
		C5201	QEMU0JM-227	E CAPACITOR 220μF,6.3V
		C5202	QEMT1CM-827	E CAPACITOR 820μF,16V
		C5203	QETN1CM-227	E CAPACITOR 220μF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C5204	QEMT1AM-228	E CAPACITOR	2200µF,10V
		C5205	QETN1AM-227	E CAPACITOR	220µF,10V
		C5206	QEMU1EM-187	E CAPACITOR	180µF,25V
		C5207	QETN2AM-475	E CAPACITOR	4.7µF,100V
		C5208	QEMU1HM-186	E CAPACITOR	18µF,50V
		C5210	QEMT1AM-687	E CAPACITOR	680µF,10V
		C5211	QETN1AM-227	E CAPACITOR	220µF,10V
		C5212	QEMT1AM-687	E CAPACITOR	680µF,10V
		C5213	QETN1AM-227	E CAPACITOR	220µF,10V
		C5301	QFLC1HJ-103Z	F CAPACITOR	0.01µF,50V
		C5302	QFLC1HJ-473Z	F CAPACITOR	0.047µF,50V
		C5303	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
		C5304	QETN1EM-476	E CAPACITOR	47µF,25V
		C5305	QFLC1HJ-103Z	F CAPACITOR	0.01µF,50V
		L5201	PELN1184	COIL	33µH
		L5202	PU60944-330K	COIL	33µH
		L5203	PELN1184	COIL	33µH
		L5205	PELN1184	COIL	33µH
		K5101	QQR0678-001Z	FERRITE BEAD	
	⚠	PC5101	PC817X	IC(PHOTO COUPLER)	
	⚠	T5001	QQS0092-001	SW TRANSFORMER	
		HS2	LP40515-001B	HEAT SINK,D5206	
		ST2	PU59391	STYLE PIN	
		OT1	QYTDST3008Z	SCREW,D5206	
		FC5001	QNG0006-001Z	FUSE CLIP,F5001	
		FC5002	QNG0006-001Z	FUSE CLIP,F5001	
	⚠	LF5002	QQR0908-001	LINE FILTER	
	⚠	CN5001	QGA7901C3-02	CONNECTOR,(1-2)AC IN	
		CN5201	QGF1208C1-19	FPC CONNECTOR,(1-19)REG	
	⚠	CP5301	ICP-N25	CIRCUIT PROTECTOR	
	⚠	F5001	QMF51N2-2R0J1	FUSE	T2.0A,AC250V

****

REGULATOR BOARD ASSEMBLY <02>

	PW2	LPA10119-04A2	REG BOARD ASSY
	IC5321	PQ15RW11	IC
	Q5321	2SD2528/QP/	TRANSISTOR
	Q5322	2SD1819A/RS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SC4081/RS/-X	TRANSISTOR
	Q5323	2SA933AS/RS/-T	TRANSISTOR
		or 2SA1267/YG/-T	TRANSISTOR
	Q5324	DTC114EU	TRANSISTOR
		or RN1302	TRANSISTOR
		or UN5211	TRANSISTOR
		or PDTC114EU	TRANSISTOR
	Q5326	2SD2375/QP/	TRANSISTOR
	Q5327	2SD1819A/RS/-X	TRANSISTOR
		or 2SC4081/RS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q5328	2SD1302/ST/-T	TRANSISTOR
		or 2SD1450/ST/-T	TRANSISTOR
	Q5329	DTA114EU	TRANSISTOR
		or RN2302	TRANSISTOR
		or UN5111	TRANSISTOR
		or PDTA114EU	TRANSISTOR
	Q5331	2SB1068/KU/-T	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		Q5332	DTC114EU	TRANSISTOR	
			or PDTC114EU	TRANSISTOR	
			or UN5211	TRANSISTOR	
			or RN1302	TRANSISTOR	
		Q5335	2SB1256	TRANSISTOR	
		Q5336	DTC114TU	TRANSISTOR	
			or UN5215	TRANSISTOR	
		Q5341	DTC114EU	TRANSISTOR	
			or PDTC114EU	TRANSISTOR	
			or RN1302	TRANSISTOR	
			or UN5211	TRANSISTOR	
		D5323	11ES2	DIODE	
			or ERA15-02-T2	DIODE	
			or 1A3G	DIODE	
		D5324	11ES2	DIODE	
			or ERA15-02-T2	DIODE	
			or 1A3G	DIODE	
		D5325	RD5.1JS/B2/-T2	ZENER DIODE	
			or MA4051N/M/-T2	ZENER DIODE	
		D5326	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5327	RD5.1JS/B2/-T2	ZENER DIODE	
			or MA4051N/M/-T2	ZENER DIODE	
		D5328	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5329	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5330	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5331	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5333	1SS133	DIODE	
			or 1SS270A	DIODE	
		D5334	11ES2	DIODE	
			or ERA15-02-T2	DIODE	
			or 1A3G	DIODE	
		D5337	MTZJ12A	ZENER DIODE	
			or RD12ES/B1/-T2	ZENER DIODE	
		R5322	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5323	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5324	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5325	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5326	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5327	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5328	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5329	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5330	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5331	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R5332	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5333	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5336	NRVA02D-472X	CMF RESISTOR	4.7kΩ,1/10W
		R5337	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W
		R5338	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R5339	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R5340	QRL01DJ-101X	OMF RESISTOR	100Ω,1W
		R5345	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R5346	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		B5301	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B5302	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B5303	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B5306	QUY153-050Y	IM BUS WIRE	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		B5307	QUY153-050Y	IM BUS WIRE	
		B5309	QUY153-050Y	IM BUS WIRE	
		B5310	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C5321	QETN1AM-107	E CAPACITOR	100µF,10V
		C5322	QETN1HM-106	E CAPACITOR	10µF,50V
		C5323	QETN1CM-107	E CAPACITOR	100µF,16V
		C5324	QFLC1HJ-102Z	F CAPACITOR	0.001µF,50V
		C5325	QFLC1HJ-102Z	F CAPACITOR	0.001µF,50V
		C5326	QETN1AM-107	E CAPACITOR	100µF,10V
		C5329	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C5330	QETN1AM-107	E CAPACITOR	100µF,10V
		C5331	QETN1AM-107	E CAPACITOR	100µF,10V
		L5321	QQL01BK-221Z	COIL	220µH
		HS1	LP40090-001A	HEAT SINK,Q5321	
		OT1	QYTDST3006Z	SCREW,Q5321	
		CN5301	QGF1208C1-19	FPC CONNECTOR,(1-19)SW/REG	
		CN5321	QGF1208F1-13	FPC CONNECTOR,(1-13)	
		CN5322	QGF1208F1-11	FPC CONNECTOR,(1-11)	
		CN5323	QGA2001C1-10	CONNECTOR,(1-10)DV MAIN	
		CN5324	QGA2001C1-05	CONNECTOR,(1-5)DV PRE/REC	
		CN5325	QGA2001F1-02	CONNECTOR,(1-2)FAN MOTOR	
	⚠	CP5321	ICP-N25	CIRCUIT PROTECTOR	
	⚠	CP5322	ICP-N25	CIRCUIT PROTECTOR	
	⚠	CP5323	ICP-N25	CIRCUIT PROTECTOR	

****

MAIN BOARD ASSEMBLY <03>

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		PW1	LPA10113-05A	MAIN BOARD ASSY
		IC1	JCP8022-NSD-2	IC
		IC702	MM1113XF	IC
		IC703	MM1228XF	IC
		IC705	MM1117XF	IC
		IC706	PQ05TZ1U	IC
			or PQ05TZ5U	IC
		IC707	AN3916	IC
		IC712	MM1111XF	IC
		IC2601	BU4052BCF	IC
		IC2602	BA15218F-XE	IC
		IC2603	BU4052BCF	IC
		IC2605	BA15218F-XE	IC
		IC2606	BU4052BCF	IC
		IC2607	BU4052BCF	IC
		IC2608	BA15218F-XE	IC
		IC2609	LA7151	IC
		IC2610	BU4053BCF	IC
		IC3001	HD6432194B02F	IC(MCU)
		IC3002	S-80727AN-DQ-X	IC
			or S-80827ANUP-W	IC
		IC3003	AT24C08-10PC	IC
			or 24LC08B/P	IC
		IC3004	BA6956AN	IC
		IC3301	UPD780053GC042	IC(MCU)
		IC3302	TC74HC4053AF	IC
		Q1	2SC4081/S/-X	TRANSISTOR
		Q2	2SC4081/S/-X	TRANSISTOR
		Q3	2SC4081/S/-X	TRANSISTOR
		Q4	2SC4081/S/-X	TRANSISTOR
		Q5	2SB1218A/QR/-X	TRANSISTOR
			or 2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q7	2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
		Q8	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q9	2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SA1576A/QR/-X	TRANSISTOR
		Q12	2SB1218A/QR/-X	TRANSISTOR
			or 2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q17	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q21	2SB1218A/QR/-X	TRANSISTOR
			or 2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q24	2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q38	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q401	2SA1576A/QR/-X	TRANSISTOR
		Q402	2SA1576A/QR/-X	TRANSISTOR
		Q403	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q404	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q405	2SA1576A/QR/-X	TRANSISTOR
		Q703	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q704	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q705	2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q706	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q707	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q708	2SA1576A/QR/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q709	2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		Q710	2SA1576A/QR/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q711	2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q712	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q713	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q714	2SA1576A/QR/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q725	2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q729	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q730	DTA144WU	TRANSISTOR
			or PDTA144WU	TRANSISTOR
			or RN2309	TRANSISTOR
			or UN511E	TRANSISTOR
		Q2001	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q2002	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q2003	DTA144WU	TRANSISTOR
			or PDTA144WU	TRANSISTOR
			or RN2309	TRANSISTOR
			or UN511E	TRANSISTOR
		Q2004	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q2051	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q2052	2SA1576A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
		Q2053	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q2054	2SA1576A/QR/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q2061	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q2062	2SA1576A/QR/-X	TRANSISTOR
			or 2SB1218A/QR/-X	TRANSISTOR
			or 2PA1576/R/-X	TRANSISTOR
		Q2251	DTA144WU	TRANSISTOR
			or PDTA144WU	TRANSISTOR
			or RN2309	TRANSISTOR
			or UN511E	TRANSISTOR
		Q2252	DTC114EU	TRANSISTOR
			or PDTC114EU	TRANSISTOR
			or RN1302	TRANSISTOR
			or UN5211	TRANSISTOR
		Q2601	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q2602	2SC4081/QRS/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q3001	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q3002	PTZ-NV16	PHOTO TRANSISTOR
			or PTZ-NV16A	PHOTO TRANSISTOR
		Q3003	PTZ-NV16	PHOTO TRANSISTOR
			or PTZ-NV16A	PHOTO TRANSISTOR
		Q3004	2SD1819A/QRS/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
		Q3005	2SD1819A/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SC4081/QRS/-X	TRANSISTOR
		Q3009	UN521E	TRANSISTOR
			or RN1309	TRANSISTOR
			or DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
		Q3010	DTC144WU	TRANSISTOR
			or PDTC144WU	TRANSISTOR
			or UN521E	TRANSISTOR
			or RN1309	TRANSISTOR
		Q3011	2SC4081/QRS/-X	TRANSISTOR
			or 2PC4081/R/-X	TRANSISTOR
			or 2SD1819A/QRS/-X	TRANSISTOR
		Q3302	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q3303	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q3304	DTC144WU	TRANSISTOR
			or UN521E	TRANSISTOR
			or RN1309	TRANSISTOR
		Q3305	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q3306	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q3307	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q3308	DTC144WU	TRANSISTOR
			or RN1309	TRANSISTOR
			or UN521E	TRANSISTOR
		Q4001	UN5211	TRANSISTOR
			or RN1302	TRANSISTOR
			or DTC114EU	TRANSISTOR
		Q4003	UN5211	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
			or DTC114EU	TRANSISTOR	
			or RN1302	TRANSISTOR	
		Q6040	2SC4081/RS/-X	TRANSISTOR	
		Q6041	2SA1576A/QR/-X	TRANSISTOR	
			or 2PA1576/R/-X	TRANSISTOR	
		Q6042	DTC144EU	TRANSISTOR	
		Q6501	DTC143TU	TRANSISTOR	
		Q6502	DTC143TU	TRANSISTOR	
		Q6551	2SC1740S/QRS/-T	TRANSISTOR	
			or KTC3199/YG/-T	TRANSISTOR	
			or 2SC3199/YG/-T	TRANSISTOR	
		Q7501	2SC1317/RS/-T	TRANSISTOR	
		Q7502	DTC144WU	TRANSISTOR	
			or PDTC144WU	TRANSISTOR	
			or RN1309	TRANSISTOR	
			or UN521E	TRANSISTOR	
		D706	1SS355	DIODE	
		D2001	1SS355	DIODE	
		D2121	MTZJ8.2C	ZENER DIODE	
		D2201	11ES2	DIODE	
		D3001	LNB2301L01VI	LE DIODE	
		D3002	1SS133	DIODE	
		D3003	RD33ES/B2/-T2	ZENER DIODE	
			or MTZJ33C	ZENER DIODE	
		D3004	11ES2	DIODE	
			or 1A3G	DIODE	
		D3005	11ES2	DIODE	
			or 1A3G	DIODE	
		D3007	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		D3011	1SS133	DIODE	
		D3012	1SS133	DIODE	
		D3301	1SS355	DIODE	
		D4001	1SS355	DIODE	
		D4002	1SS355	DIODE	
		D6002	HZ30-2L-T2	ZENER DIODE	
			or HZ30-2LTD	Z DIODE (M)	
		D6040	DA204U	DIODE	
		D6551	MTZJ10B	ZENER DIODE	
		R1	NRVA02D-622X	CMF RESISTOR	6.2kΩ,1/10W
		R2	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10W
		R3	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R5	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R8	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R9	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R21	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R22	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R23	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R25	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R26	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R27	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R28	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R29	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R30	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R31	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
		R32	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R34	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R36	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W
		R39	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R42	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
		R44	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R45	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R46	NRSA02J-331X	MG RESISTOR	330Ω,1/10W
		R48	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R51	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R68	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R70	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R77	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R88	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
		R90	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R92	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R93	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R104	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R113	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R401	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R402	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R403	NRSA02J-391X	MG RESISTOR	390Ω,1/10W
		R404	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R405	NRSA02J-683X	MG RESISTOR	68kΩ,1/10W
		R407	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R408	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R409	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R704	NRSA02J-333X	MG RESISTOR	33kΩ,1/10W
		R705	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R706	NRVA02D-271X	CMF RESISTOR	270Ω,1/10W
		R707	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R709	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R710	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R711	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R712	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R713	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R714	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
		R716	NRVA02D-132X	CMF RESISTOR	1.3kΩ,1/10W
		R717	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R718	NRVA02D-271X	CMF RESISTOR	270Ω,1/10W
		R719	NRVA02D-431X	CMF RESISTOR	430Ω,1/10W
		R720	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R721	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R722	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W
		R723	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W
		R724	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R725	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R726	NRSA02J-394X	MG RESISTOR	390kΩ,1/10W
		R727	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R728	NRVA02D-271X	CMF RESISTOR	270Ω,1/10W
		R729	NRVA02D-271X	CMF RESISTOR	270Ω,1/10W
		R730	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
		R767	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R768	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R769	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
		R770	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R771	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R772	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R773	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R774	NRSA02J-274X	MG RESISTOR	270kΩ,1/10W
		R775	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R777	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R785	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		VR701	QVP0039-333Z	TRIM RESISTOR,DV AGC	
		R2003	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R2004	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R2005	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2006	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2007	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2009	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2010	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2011	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2012	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R2013	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R2014	NRSA02J-224X	MG RESISTOR	220kΩ,1/10W
		R2015	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
		R2016	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2017	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2018	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2019	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2020	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2024	QRE141J-472	RESISTOR	4.7kΩ,1/4W
		R2053	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
		R2054	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R2055	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R2056	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R2057	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2058	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2059	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2060	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2061	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R2062	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		R2063	NRSA02J-151X	MG RESISTOR	150Ω,1/10W
		R2064	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R2065	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R2121	QRE141J-151Y	RESISTOR	150Ω,1/4W
		R2206	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R2207	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
		R2213	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2215	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R2217	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2218	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2219	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2220	NRSA02J-393X	MG RESISTOR	39kΩ,1/10W
		R2223	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2224	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R2225	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R2228	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R2251	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2252	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R2601	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2602	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2603	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2604	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2605	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2606	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2607	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2608	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2609	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2610	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2611	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2613	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2614	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2616	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2617	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2618	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2623	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R2624	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R2625	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R2626	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R2627	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2628	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2629	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2630	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2631	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2632	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2633	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2634	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2635	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2636	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2637	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R2638	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R2651	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2652	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2653	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2654	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2655	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2656	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2657	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2658	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2659	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R2660	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2661	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2662	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2663	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2664	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2665	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2666	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2667	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2668	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2681	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2682	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2683	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R2684	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2685	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R2686	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R2687	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2688	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2689	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R2691	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R2692	NRSA02J-121X	MG RESISTOR	120Ω,1/10W
		R3011	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3012	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3013	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3016	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3017	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3018	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3021	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3022	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3025	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3026	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3027	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3029	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3030	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3031	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3033	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3034	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3038	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R3040	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3041	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3042	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3044	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3046	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3047	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3048	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R3049	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3050	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3051	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3052	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3053	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3054	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3055	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3056	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3057	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3058	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3059	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3060	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3061	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3062	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3063	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3066	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3069	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R3071	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3072	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3073	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3075	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3076	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3077	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3078	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3079	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3083	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3085	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3086	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3087	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3088	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3089	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3091	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3094	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3095	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3096	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3097	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3103	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3104	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3105	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3106	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3107	NRSA02J-682X	MG RESISTOR	6.8kΩ,1/10W
		R3201	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3202	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3203	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3204	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R3205	QRE141J-181Y	RESISTOR	180Ω,1/4W
		R3206	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R3207	NRSA02J-183X	MG RESISTOR	18kΩ,1/10W
		R3208	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
		R3209	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R3210	NRSA02J-181X	MG RESISTOR	180Ω,1/10W
		R3211	NRSA02J-273X	MG RESISTOR	27kΩ,1/10W
		R3212	NRSA02J-474X	MG RESISTOR	470kΩ,1/10W
		R3213	NRSA02J-334X	MG RESISTOR	330kΩ,1/10W
		R3214	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3215	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3216	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3217	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R3218	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
		R3219	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3220	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
		R3222	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3223	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3224	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3225	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3229	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R3230	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3231	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3233	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3235	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3236	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3237	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3238	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3239	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3241	NRSA02J-104X	MG RESISTOR	100kΩ,1/10W
		R3247	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3251	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3301	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3302	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3303	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3305	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3306	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3308	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3309	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3310	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3311	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3312	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3313	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3314	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3315	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3316	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3317	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3318	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3319	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3320	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3321	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R3322	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3323	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3324	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3325	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3326	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3327	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3328	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3329	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3330	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3331	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3332	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3334	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3335	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3336	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3337	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3338	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3339	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R3340	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3341	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R3342	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3343	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3344	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3346	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3347	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3348	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3349	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3350	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3351	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3352	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3353	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3354	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3355	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3357	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3358	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3360	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3361	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3362	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3363	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3364	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3365	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3366	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3369	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
		R3371	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3376	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3377	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3378	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3379	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3380	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3401	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3402	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R3403	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3412	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R3417	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R3418	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R3419	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R3424	NRSA02J-473X	MG RESISTOR	47kΩ,1/10W
		R3425	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R4001	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R4003	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R4004	NRSA02J-561X	MG RESISTOR	560Ω,1/10W
		R4005	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R4007	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4008	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4009	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4010	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4011	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4012	NRSA02J-222X	MG RESISTOR	2.2kΩ,1/10W
		R4013	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4014	NRSA02J-182X	MG RESISTOR	1.8kΩ,1/10W
		R4015	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R4016	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4017	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4018	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R4019	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4020	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R4021	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R6020	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6021	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6022	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R6031	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6032	NRSA02J-123X	MG RESISTOR	12kΩ,1/10W
		R6040	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R6041	NRSA02J-184X	MG RESISTOR	180kΩ,1/10W
		R6042	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
		R6043	NRSA02J-223X	MG RESISTOR	22kΩ,1/10W
		R6044	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R6045	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R6046	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R6508	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6510	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6551	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R6552	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R6553	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R6554	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R7505	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R7506	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R7507	QRE121J-100Y	RESISTOR	10Ω,1/2W
		R7508	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		B3	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B8	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B18	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B37	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B38	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B42	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B49	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B701	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B707	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B718	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B722	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B724	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B726	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B727	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B729	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B731	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B732	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B733	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B738	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B741	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B2012	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B2101	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B3003	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B3015	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B3016	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B3026	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B3302	QUY160-150Y	IM BUS WIRE	
		B6001	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B6030	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B6034	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B6565	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7504	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7505	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7511	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7513	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7515	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7516	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7518	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7519	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C1	NCB21EK-103X	CAPACITOR	0.01μF,25V
		C2	NCB21EK-103X	CAPACITOR	0.01μF,25V
		C3	NCB21EK-103X	CAPACITOR	0.01μF,25V
		C4	NCB21EK-103X	CAPACITOR	0.01μF,25V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C5	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C6	NCB11EK-104X	CAPACITOR	0.1µF,25V
		C7	NCB21HK-102X	CAPACITOR	0.001µF,50V
		C8	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C9	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C10	NDC21HG-151X	CAPACITOR	150pF,50V
		C11	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C12	NDC21HJ-7R0X	CAPACITOR	7pF,50V
		C14	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C15	NCB21EK-103X	CAPACITOR	0.01µF,25V
		C16	NCB11EK-104X	CAPACITOR	0.1µF,25V
		C17	QEKJ1HM-335	E CAPACITOR	3.3µF,50V
		C18	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C19	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C20	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C21	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C22	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C23	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C24	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C25	NDC21HJ-4R0X	CAPACITOR	4pF,50V
		C26	NCB21EK-103X	CAPACITOR	0.01µF,25V
		C27	NCB21HK-223X	CAPACITOR	0.022µF,50V
		C28	QEKJ1HM-335	E CAPACITOR	3.3µF,50V
		C29	NCB21HK-472X	CAPACITOR	0.0047µF,50V
		C30	NCB21CK-474X	CAPACITOR	0.47µF,16V
		C31	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C32	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C33	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C34	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C35	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C36	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C37	NCB21AK-105X	CAPACITOR	1µF,10V
		C38	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C39	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C40	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C54	NDC21HJ-221X	CAPACITOR	220pF,50V
		C59	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C60	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C61	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C63	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C64	NDC21HJ-120X	CAPACITOR	12pF,50V
		C69	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C70	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C71	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C72	NDC21HJ-470X	CAPACITOR	47pF,50V
		C73	NDC21HJ-120X	CAPACITOR	12pF,50V
		C74	NDC21HJ-120X	CAPACITOR	12pF,50V
		C80	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C84	NDC21HJ-220X	CAPACITOR	22pF,50V
		C94	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C106	NDC21HJ-560X	CAPACITOR	56pF,50V
		C108	NDC21HJ-150X	CAPACITOR	15pF,50V
		C109	NCB21CK-224X	CAPACITOR	0.22µF,16V
		C110	NDC21HJ-331X	CAPACITOR	330pF,50V
		C401	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C402	NCB21HK-223X	CAPACITOR	0.022µF,50V
		C403	NDC21HJ-151X	CAPACITOR	150pF,50V
		C404	NDC21HJ-470X	CAPACITOR	47pF,50V
		C406	NDC21HJ-681X	CAPACITOR	680pF,50V
		C407	NDC21HJ-180X	CAPACITOR	18pF,50V
		C704	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C705	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C706	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C707	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		C708	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C709	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
		C711	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C712	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C713	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C714	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C715	QEKJ1CM-226	E CAPACITOR	22µF,16V
		C717	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C718	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C719	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C720	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C722	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C757	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C759	QEPF1HM-225	NP E CAPACITOR	2.2µF,50V
		C760	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C761	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C763	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C764	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
		C765	NCB21HK-332X	CAPACITOR	0.0033µF,50V
		C766	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C767	NCB21HK-473X	CAPACITOR	0.047µF,50V
		C768	QEKJ0JM-226	E CAPACITOR	22µF,6.3V
		C769	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C770	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C771	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C772	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C773	NDC21HJ-470X	CAPACITOR	47pF,50V
		C791	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C799	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C801	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C802	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C803	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2001	QETJ1HM-475	E CAPACITOR	4.7µF,50V
		C2002	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2003	QEKJ0JM-476	E CAPACITOR	47µF,6.3V
		C2004	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2005	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2006	NCB21HK-123X	CAPACITOR	0.012µF,50V
		C2007	QEKJ1CM-226	E CAPACITOR	22µF,16V
		C2008	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2009	NCB21HK-102X	CAPACITOR	0.001µF,50V
		C2010	NCB21HK-222X	CAPACITOR	0.0022µF,50V
		C2011	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2012	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2051	NCB21HK-331X	CAPACITOR	330pF,50V
		C2052	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
		C2053	NCB21HK-472X	CAPACITOR	0.0047µF,50V
		C2054	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2055	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2061	QFLC1HJ-333Z	F CAPACITOR	0.033µF,50V
		C2062	NCB21HK-332X	CAPACITOR	0.0033µF,50V
		C2063	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2064	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2121	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C2201	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C2202	NCB21EK-333X	CAPACITOR	0.033µF,25V
		C2203	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2204	NCB21HK-102X	CAPACITOR	0.001µF,50V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C2205	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C2207	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C2208	QETJ1HM-475	E CAPACITOR	4.7µF,50V
		C2215	QERF1EM-475	E CAPACITOR	4.7µF,25V
		C2216	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
		C2217	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2218	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
		C2219	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2220	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2221	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2222	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
		C2223	QEKJ1HM-474	E CAPACITOR	0.47µF,50V
		C2224	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2225	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C2226	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2227	NCB21CK-104X	CAPACITOR	0.1µF,16V
		C2229	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2230	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2231	NCB21HK-222X	CAPACITOR	0.0022µF,50V
		C2251	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C2252	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C2253	NCB21CK-104X	CAPACITOR	0.1µF,16V
		C2254	NCB21CK-104X	CAPACITOR	0.1µF,16V
		C2255	NDC21HJ-181X	CAPACITOR	180pF,50V
		C2601	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2602	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2603	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2604	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C2605	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2606	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C2607	QEKJ1HM-105	E CAPACITOR	1µF,50V
		C2610	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2611	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2612	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2651	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2652	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2653	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2654	NDC21HJ-101X	CAPACITOR	100pF,50V
		C2655	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2656	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2657	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2658	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2659	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2660	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2661	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2681	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C2682	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C2683	QEKJ1CM-476	E CAPACITOR	47µF,16V
		C3001	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3002	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C3003	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C3004	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3008	NCB21HK-102X	CAPACITOR	0.001µF,50V
		C3010	QEZ0244-229	EDL CAPACITOR	0.0022F,5.5V
		C3012	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
		C3015	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3016	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3022	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3024	NDC21HJ-120X	CAPACITOR	12pF,50V
		C3027	QERF1CM-106	E CAPACITOR	10µF,16V
		C3030	QERF1CM-226	E CAPACITOR	22µF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C3031	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3032	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3033	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3036	NDC21HJ-180X	CAPACITOR	18pF,50V
		C3037	NDC21HJ-120X	CAPACITOR	12pF,50V
		C3040	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C3041	NDC21HJ-100X	CAPACITOR	10pF,50V
		C3042	QETJ0JM-477	E CAPACITOR	470µF,6.3V
		C3054	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C3310	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C3311	QEKJ1HM-335	E CAPACITOR	3.3µF,50V
		C3312	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C3313	NCB21EK-473X	CAPACITOR	0.047µF,25V
		C4002	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C4003	NCB21HK-102X	CAPACITOR	0.001µF,50V
		C4004	QERF1CM-226	E CAPACITOR	22µF,16V
		C4006	QERF0JM-476	E CAPACITOR	47µF,6.3V
		C4007	NCB21HJ-102X	CAPACITOR	0.001µF,50V
		C4008	NCB21AK-105X	CAPACITOR	1µF,10V
		C4009	NCB21HK-563X	CAPACITOR	0.056µF,50V
		C4010	NCB21EK-223X	CAPACITOR	0.022µF,25V
		C4011	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C4012	NCB21EK-224X	CAPACITOR	0.22µF,25V
		C4013	NCB21HK-563X	CAPACITOR	0.056µF,50V
		C4014	NDC21HJ-101X	CAPACITOR	100pF,50V
		C4015	NCB21HJ-102X	CAPACITOR	0.001µF,50V
		C4017	NCB21HK-222X	CAPACITOR	0.0022µF,50V
		C6040	NCB21EK-104X	CAPACITOR	0.1µF,25V
		C6042	NDC21HJ-471X	CAPACITOR	470pF,50V
		C6043	NCB21HK-223X	CAPACITOR	0.022µF,50V
		C6044	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
		C7503	QETJ0JM-477	E CAPACITOR	470µF,6.3V
		C7515	NCB21EK-104X	CAPACITOR	0.1µF,25V
		L1	QQL29BJ-100Z	COIL	10µH
		L2	QQL231J-101Y	COIL	100µH
		L3	QQL29BJ-100Z	COIL	10µH
		L4	QQL29BJ-100Z	COIL	10µH
		L5	QQL29BJ-100Z	COIL	10µH
		L11	QQLZ011-120Z	COIL	12µH
		L13	QQL231J-101Y	COIL	100µH
		L15	QQL29BJ-100Z	COIL	10µH
		L18	QUY153-050Y	IM BUS WIRE	
		L19	QQL231J-100Y	COIL	10µH
		L20	QUY153-050Y	IM BUS WIRE	
		L24	QQL231J-180Y	COIL	18µH
		L27	QQL231J-151Y	COIL	150µH
		L28	QQL231J-150Y	COIL	15µH
		L401	QQL071J-150Y	COIL	15µH
		L402	QUY153-050Y	IM BUS WIRE	
		L701	QQL29BJ-4R7Z	COIL	4.7µH
		L702	QQL29BJ-4R7Z	COIL	4.7µH
		L714	QQL29BJ-4R7Z	COIL	4.7µH
		L715	QQL29BJ-4R7Z	COIL	4.7µH
		L2001	QQL29BJ-100Z	COIL	10µH
		L2251	QQL29BJ-100Z	COIL	10µH
		L2252	QQL29BJ-151Z	COIL	150µH
		L3011	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		L3012	QRE141J-0R0Y	RESISTOR	0Ω,1/4W
		L3301	QQL231J-100Y	COIL	10µH
		L6001	QUY153-050Y	IM BUS WIRE	
		L6005	QUY153-050Y	IM BUS WIRE	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		L7501	QQL29BJ-101Z	COIL	100µH
		CF3301	QAX0227-001Z	RESONATOR	
		X2	QAX0575-001	CRYSTAL RESONATOR	
		X3001	QAX0444-001	CRYSTAL RESONATOR	
		X3002	QAX0527-001	CRYSTAL RESONATOR	
		S3001	QSW0602-004	PUSH SWITCH,REC SAFETY	
		S3002	QSW0695-001	PUSH SWITCH,S CASS SW	
		K2001	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		K2002	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		K2251	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		K2252	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		K2253	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		PC3001	GP3S123	IC(PHOTO SENSOR	
		PC3002	GP3S123	IC(PHOTO SENSOR	
		T2051	PELN0860	OSC TRANSFORMER	
		T2052	PELN0861	OSC TRANSFORMER	
		T6040	PELN0806	LC TRAP	
		TU6001	QAU0163-001	TUNER	
		SD1	LP30644-001A	SHIELD CASE(PRE)	
		WR100	QUQ112-1414CG	FFC WIRE,S-SUB	
		CN1	QGF1028C1-13	FPC CONNECTOR,(1-13)U.DRUM	
		CN703	QGA2001C1-06	CONNECTOR,(1-6)DV MAIN	
		CN2001	QGF1207C1-07	FPC CONNECTOR,(1-7)A/C HEAD	
		CN2002	QGB2532J1-02	CONNECTOR,(1-2)FE HEAD	
		CN2601	QGF1016C3-08	FFC/FPC CONNECTOR,(1-8)DV AUDIO	
		CN3001	QGF1207C1-05	FPC CONNECTOR,(1-5)DRUM MDA	
		CN3002	QGB2532J1-02	CONNECTOR,(1-2)LOADING MOTOR	
		CN3003	QGB2015M2-08	CONNECTOR,(1-8)CAPSTAN MOTOR	
		CN3004	QGB2534J2-04	CONNECTOR,(1-4)ROTARY ENCODER	
		CN3011	QGF1209F2-18	FFC/FPC CONNECTOR,(1-18)SW/DISPLAY	
		CN3014	QGF1016C3-06	FFC/FPC CONNECTOR,(1-6)DV MAIN	
		CN7501	QGB2024K1-13S	CONNECTOR,(1-13)TERMINAL	
		CN7502	QGB2024K1-07S	CONNECTOR,(1-7)TERMINAL	
		CN7503	QGB2024K1-10S	CONNECTOR,(1-10)TERMINAL	
		CN7504	QGB2024K1-11S	CONNECTOR,(1-11)TERMINAL	
		CN7506	QGF1207C1-14	FPC CONNECTOR,(1-14)S-SUB	
		CN7507	QGF1209F2-16	FFC/FPC CONNECTOR,(1-16)JOG	
		CN7508	QGF1207C1-11	FPC CONNECTOR,(3-13)REG	
		CN7509	QGF1207C1-13	FPC CONNECTOR,(3-15)REG	
	⚠	CP3002	ICP-N15	CIRCUIT PROTECTOR	
	⚠	CP3003	ICP-N25	CIRCUIT PROTECTOR	
	⚠	CP3004	ICP-N15	CIRCUIT PROTECTOR	
	⚠	CP4001	ICP-N25	CIRCUIT PROTECTOR	

****

3D DIGITAL/4M BOARD ASSEMBLY <05>

	PW1	LPA10104-03B	3D DIGITAL/4M BOARD ASSY
	IC1401	JCP8026	IC
	IC1402	MN47V77S-XE	IC
	Q1401	2SC1317/RS/-T	TRANSISTOR
	Q1402	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1403	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1406	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1407	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1408	2SC4081/S/-X	TRANSISTOR
	Q1410	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q1412	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q1413	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1417	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1418	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q1419	DTC124TU	TRANSISTOR
	D1401	RD4.3ES/B2/-T2	ZENER DIODE
		or MTZJ4.3B	ZENER DIODE
	D1402	RB721Q-40-T2	SB DIODE
	R1401	NRSA02J-271X	MG RESISTOR 270Ω,1/10W
	R1402	NRSA02J-101X	MG RESISTOR 100Ω,1/10W
	R1404	NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
	R1406	NRSA02J-471X	MG RESISTOR 470Ω,1/10W
	R1407	NRSA02J-272X	MG RESISTOR 2.7kΩ,1/10W
	R1410	NRSA02J-241X	MG RESISTOR 240Ω,1/10W
	R1411	NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W
	R1413	NRSA02J-471X	MG RESISTOR 470Ω,1/10W
	R1414	NRSA02J-821X	MG RESISTOR 820Ω,1/10W
	R1415	NRSA02J-221X	MG RESISTOR 220Ω,1/10W
	R1416	NRSA02J-104X	MG RESISTOR 100kΩ,1/10W
	R1417	NRSA02J-101X	MG RESISTOR 100Ω,1/10W
	R1418	NRSA02J-471X	MG RESISTOR 470Ω,1/10W
	R1421	NRSA02J-331X	MG RESISTOR 330Ω,1/10W
	R1426	NRSA02J-821X	MG RESISTOR 820Ω,1/10W
	R1427	NRSA02J-333X	MG RESISTOR 33kΩ,1/10W
	R1428	NRSA02J-393X	MG RESISTOR 39kΩ,1/10W
	R1429	NRSA02J-152X	MG RESISTOR 1.5kΩ,1/10W
	R1430	NRSA02J-222X	MG RESISTOR 2.2kΩ,1/10W
	R1431	NRSA02J-821X	MG RESISTOR 820Ω,1/10W
	R1432	NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
	R1433	NRSA02J-510X	MG RESISTOR 51Ω,1/10W
	R1434	NRSA02J-153X	MG RESISTOR 15kΩ,1/10W
	R1435	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
	R1436	NRSA02J-392X	MG RESISTOR 3.9kΩ,1/10W
	R1437	NRSA02J-392X	MG RESISTOR 3.9kΩ,1/10W
	R1438	NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
	R1439	NRSA02J-273X	MG RESISTOR 27kΩ,1/10W
	R1440	NRSA02J-473X	MG RESISTOR 47kΩ,1/10W
	R1446	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1447	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1448	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1449	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1450	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1452	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1453	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R1455	NRSA02J-681X	MG RESISTOR 680Ω,1/10W
	R1458	NRSA02J-561X	MG RESISTOR 560Ω,1/10W
	R1459	NRSA02J-681X	MG RESISTOR 680Ω,1/10W
	R1460	NRSA02J-273X	MG RESISTOR 27kΩ,1/10W
	R1462	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	VR1401	QVZ3521-103Z	V RESISTOR,D/A LEVEL ADJ.
	B1417	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	B1419	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	C1401	QEKJ1CM-336	E CAPACITOR 33µF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C1402	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C1403	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
		C1404	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1405	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1406	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C1407	NDC21HJ-680X	CAPACITOR	68pF,50V
		C1408	NDC21HJ-330X	CAPACITOR	33pF,50V
		C1410	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C1411	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1412	NDC21HJ-680X	CAPACITOR	68pF,50V
		C1413	NDC21HJ-330X	CAPACITOR	33pF,50V
		C1415	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1416	QEKJ1CM-106	E CAPACITOR	10µF,16V
		C1417	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1421	NDC21HJ-330X	CAPACITOR	33pF,50V
		C1422	NDC21HJ-680X	CAPACITOR	68pF,50V
		C1423	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1424	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C1425	NCB21HK-103X	CAPACITOR	0.01µF,50V
		C1426	NDC21HJ-390X	CAPACITOR	39pF,50V
		C1428	NDC21HJ-220X	CAPACITOR	22pF,50V
		C1429	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
		C1430	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1432	NCF21CZ-105X	CAPACITOR	1µF,16V
		C1433	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1435	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1436	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1437	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1438	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1439	NCF21CZ-105X	CAPACITOR	1µF,16V
		C1440	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1441	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1442	NCF21CZ-105X	CAPACITOR	1µF,16V
		C1444	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1445	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1446	QEKJ0JM-107	E CAPACITOR	100µF,6.3V
		C1447	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1448	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
		C1449	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1451	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
		C1452	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1453	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1454	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1455	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1456	QEKJ0JM-337	E CAPACITOR	330µF,6.3V
		C1457	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1458	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1459	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1460	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1461	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1462	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1463	QEKJ0JM-336	E CAPACITOR	33µF,6.3V
		C1465	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1466	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1467	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1468	NDC21HJ-470X	CAPACITOR	47pF,50V
		C1471	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1472	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		C1473	NCF21EZ-104X	CAPACITOR	0.1µF,25V
		L1401	QQL29BJ-100Z	COIL	10µH
		L1402	QQL071J-6R8Y	COIL	6.8µH
		L1403	QQL071J-6R8Y	COIL	6.8µH
		L1404	QQL071J-6R8Y	COIL	6.8µH
		L1405	QQL29BJ-101Z	COIL	100µH
		L1406	QQL071J-330Y	COIL	33µH
		L1407	QQL29BJ-101Z	COIL	100µH
		L1408	QQL29BJ-101Z	COIL	100µH
		LC1401	QQR0657-013Z	NOISE FILTER	
		LC1402	QQR0657-010Z	NOISE FILTER	
		SD1	LP30706-001C	SHIELD FRAME(S-VHS)	
		SD2	LP30684-001A	SHIELD CASE(S-VHS)	
		CN1401	QGG2502K1-17	HEADER PIN	

****

TERMINAL BOARD ASSEMBLY <06>

	PW1	LPA10115-03A	TERMINAL BOARD ASSY
	IC7101	MM1228XF	IC
	IC7102	MM1224XF	IC
	IC7103	MM1512XN	IC
	IC7106	MM1024AF	IC
	Q7101	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q7102	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q7103	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q7104	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q7105	2SC4226/4/-X	TRANSISTOR
		or 2SC3938/QR/-X	TRANSISTOR
	Q7106	2SC4226/4/-X	TRANSISTOR
		or 2SC3938/QR/-X	TRANSISTOR
	Q7107	2SC4226/4/-X	TRANSISTOR
		or 2SC3938/QR/-X	TRANSISTOR
	Q7108	2SC4226/4/-X	TRANSISTOR
		or 2SC3938/QR/-X	TRANSISTOR
	Q7109	DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
	Q7110	DTC144WU	TRANSISTOR
		or PDTC144WU	TRANSISTOR
	Q7111	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q7114	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q7115	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q7116	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q7117	2SA1576A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	D7101	DA204U	DIODE
	D7103	DA204U	DIODE
	D7104	DA204U	DIODE
	R7101	NRSA02J-750X	MG RESISTOR 75Ω,1/10W
	R7102	NRSA02J-750X	MG RESISTOR 75Ω,1/10W
	R7103	NRVA02D-750X	CMF RESISTOR 75Ω,1/10W
	R7104	NRVA02D-750X	CMF RESISTOR 75Ω,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R7105	NRVA02D-680X	CMF RESISTOR	68Ω,1/10W
		R7106	NRVA02D-750X	CMF RESISTOR	75Ω,1/10W
		R7107	NRSA02J-750X	MG RESISTOR	75Ω,1/10W
		R7108	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7109	NRVA02D-750X	CMF RESISTOR	75Ω,1/10W
		R7110	NRVA02D-680X	CMF RESISTOR	68Ω,1/10W
		R7111	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R7112	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R7113	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7114	NRVA02D-511X	CMF RESISTOR	510Ω,1/10W
		R7115	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R7116	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7117	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R7118	NRSA02J-821X	MG RESISTOR	820Ω,1/10W
		R7119	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7120	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R7121	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R7122	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R7123	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R7124	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R7125	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
		R7126	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
		R7127	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R7128	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R7129	NRSA02J-152X	MG RESISTOR	1.5kΩ,1/10W
		R7130	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R7139	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7140	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R7141	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W
		R7142	NRSA02J-102X	MG RESISTOR	1kΩ,1/10W
		R7143	NRVA02D-561X	CMF RESISTOR	560Ω,1/10W
		R7144	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W
		R7145	NRSA02J-271X	MG RESISTOR	270Ω,1/10W
		R7158	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7159	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R7160	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R7161	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R7162	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
		R7163	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7164	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
		R7182	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7103	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7104	NRSA02J-3R3X	MG RESISTOR	3.3Ω,1/10W
		B7114	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7115	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B7116	QUY153-050Y	IM BUS WIRE	
		B7117	QUY153-050Y	IM BUS WIRE	
		C7101	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C7102	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C7103	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C7104	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C7105	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7106	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7107	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7108	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7109	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7110	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C7111	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
		C7112	QEKJ0JM-226	E CAPACITOR	22μF,6.3V
		C7113	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7114	QEKJ1HM-474	E CAPACITOR	0.47μF,50V
		C7115	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7116	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C7117	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7119	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7120	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
		C7121	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C7122	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C7123	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7124	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C7125	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C7128	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C7137	NDC21HJ-270X	CAPACITOR	27pF,50V
		C7138	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7139	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7141	QEKJ1CM-106	E CAPACITOR	10μF,16V
		C7142	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
		C7145	QEPF1HM-474	NP E CAPACITOR	0.47μF,50V
		C7146	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C7147	QEKJ0JM-107	E CAPACITOR	100μF,6.3V
		L7101	QQL29BJ-4R7Z	COIL	4.7μH
		L7102	QQL29BJ-4R7Z	COIL	4.7μH
		L7103	QQL29BJ-4R7Z	COIL	4.7μH
		L7104	QQL29BJ-4R7Z	COIL	4.7μH
		ET1	QNZ0431-001Z	EARTH TERMINAL	
		J7101	QND0084-001	S JACK,S_IN	
		J7102	QND0009-001	S JACK,S1_OUT	
		J7103	QND0009-001	S JACK,S2_OUT	
		J7104	QNN0358-001	PIN JACK,R1_IN	
		J7105	QNN0363-004	PIN JACK,R1_OUT	
		J7106	QNN0359-001	PIN JACK,R2_OUT	
		J7110	PU60659	MINI JACK,C.BOX	
		CN7101	QGB2024J1-13S	CONNECTOR,(1-13)MAIN	
		CN7102	QGB2024J1-07S	CONNECTOR,(1-7)MAIN	
		CN7103	QGB2024J1-10S	CONNECTOR,(2-11)MAIN	
		CN7104	QGB2024J1-11S	CONNECTOR,(1-11)MAIN	

****

A/C HEAD BOARD ASSEMBLY <12>

	PW1	LPA10010-01A1	A/C HEAD BOARD ASSY
	CN1	QGF1208F1-07	FPC CONNECTOR

****

DEMOD BOARD ASSEMBLY <14>

	PW1	PB11076A	DEMOD BOARD ASSY	
	IC1501	UPC1852AGT	IC	
		or UPC1854AGT	IC	
	R1501	QRE141J-102Y	RESISTOR	1kΩ,1/4W
	R1502	QRE141J-334Y	RESISTOR	330kΩ,1/4W
	R1503	QRE141J-124Y	RESISTOR	120kΩ,1/4W
	R1504	QRE141J-302Y	RESISTOR	3kΩ,1/4W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R1505	QRE141J-512Y	RESISTOR	5.1kΩ,1/4W
		R1506	QRE141J-333Y	RESISTOR	33kΩ,1/4W
		R1507	QRE141J-333Y	RESISTOR	33kΩ,1/4W
		R1508	QRE141J-392Y	RESISTOR	3.9kΩ,1/4W
		R1509	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R1510	QRE141J-392Y	RESISTOR	3.9kΩ,1/4W
		R1511	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R1517	QRE141J-123Y	RESISTOR	12kΩ,1/4W
		C1501	QETN1CM-226	E CAPACITOR	22µF,16V
		C1502	QETN1HM-104	E CAPACITOR	0.1µF,50V
		C1503	QETN1HM-105	E CAPACITOR	1µF,50V
		C1504	QETN1HM-475	E CAPACITOR	4.7µF,50V
		C1505	QETN1HM-225	E CAPACITOR	2.2µF,50V
		C1506	QETN1HM-104	E CAPACITOR	0.1µF,50V
		C1507	QFV11HJ-473	F CAPACITOR	0.047µF,50V
		C1508	QETN1HM-474	E CAPACITOR	0.47µF,50V
		C1509	QETN1HM-104	E CAPACITOR	0.1µF,50V
		C1510	QETN1HM-105	E CAPACITOR	1µF,50V
		C1511	QETN1HM-105	E CAPACITOR	1µF,50V
		C1512	QETN1HM-105	E CAPACITOR	1µF,50V
		C1513	QETN1HM-335	T CAPACITOR	3.3µF,50V
		C1514	QETN1HM-106	T CAPACITOR	10µF,50V
		C1515	QETN1HM-105	E CAPACITOR	1µF,50V
		C1516	QETN1HM-106	E CAPACITOR	10µF,50V
		C1517	QETN1HM-106	E CAPACITOR	10µF,50V
		C1518	QETN1HM-105	E CAPACITOR	1µF,50V
		C1521	QETN1HM-106	E CAPACITOR	10µF,50V
		BK1	LP40077-001A	BRACKET(BOARD)	
		CN1501	QGG2502K1-09	HEADER PIN	

****

S-SUB BOARD ASSEMBLY <15>

	PW1	LPA10103-04A	S-SUB BOARD ASSY	
	IC501	JCP8038	IC	
	IC502	VC2076DP	IC	
	R503	NRSA02J-221X	MG RESISTOR	220Ω,1/10W
	R504	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R505	NRSA02J-392X	MG RESISTOR	3.9kΩ,1/10W
	R506	NRSA02J-391X	MG RESISTOR	390Ω,1/10W
	R507	NRSA02J-122X	MG RESISTOR	1.2kΩ,1/10W
	R508	NRSA02J-151X	MG RESISTOR	150Ω,1/10W
	R509	NRSA02J-162X	MG RESISTOR	1.6kΩ,1/10W
	R510	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W
	R511	NRVA02D-471X	CMF RESISTOR	470Ω,1/10W
	R512	NRVA02D-102X	CMF RESISTOR	1kΩ,1/10W
	R513	NRVA02D-152X	CMF RESISTOR	1.5kΩ,1/10W
	R514	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W
	R515	NRVA02D-332X	CMF RESISTOR	3.3kΩ,1/10W
	R516	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R517	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	R522	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R523	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R524	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
	R525	NRSA02J-125X	MG RESISTOR	1.2MΩ,1/10W
	R527	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
	R531	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R532	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R533	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R534	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R535	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	R536	NRSA02J-101X	MG RESISTOR	100Ω,1/10W
	B501	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	B503	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
	C501	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
	C502	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
	C503	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
	C504	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C505	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
	C506	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C507	QEKJ0JM-227	E CAPACITOR	220µF,6.3V
	C508	QEPF1HM-474	NP E CAPACITOR	0.47µF,50V
	C509	QEKJ1CM-106	E CAPACITOR	10µF,16V
	C510	QEKJ0JM-227	E CAPACITOR	220µF,6.3V
	C511	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C512	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C513	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
	C514	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C515	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C516	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C517	NCF21EZ-104X	CAPACITOR	0.1µF,25V
	C518	NCB21EK-104X	CAPACITOR	0.1µF,25V
	C519	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
	C520	QERF1EM-475	E CAPACITOR	4.7µF,25V
	C521	QEKJ1EM-475	E CAPACITOR	4.7µF,25V
	C522	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
	C523	QEKJ1HM-225	E CAPACITOR	2.2µF,50V
	C524	NDC21HG-301X	CAPACITOR	300pF,50V
	C525	NDC21HG-301X	CAPACITOR	300pF,50V
	C526	NDC21HJ-101X	CAPACITOR	100pF,50V
	C527	NDC21HJ-181X	CAPACITOR	180pF,50V
	C528	NDC21HG-271X	CAPACITOR	270pF,50V
	C529	NDC21HG-820X	CAPACITOR	82pF,50V
	C530	NDC21HG-221X	CAPACITOR	220pF,50V
	C531	NDC21HG-301X	CAPACITOR	300pF,50V
	C532	NDC21HG-301X	CAPACITOR	300pF,50V
	C533	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C534	QETJ0JM-477	E CAPACITOR	470µF,6.3V
	C535	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C551	QEKJ1HM-105	E CAPACITOR	1µF,50V
	C552	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C553	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C554	QEKJ1HM-105	E CAPACITOR	1µF,50V
	C555	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C556	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C557	QEKJ1HM-105	E CAPACITOR	1µF,50V
	C558	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C559	NCB21HK-103X	CAPACITOR	0.01µF,50V
	C560	QEKJ1HM-105	E CAPACITOR	1µF,50V
	C561	QEKJ1HM-105	E CAPACITOR	1µF,50V
	C563	NCB21HK-103X	CAPACITOR	0.01µF,50V
	L501	QQL29BJ-100Z	COIL	10µH
	L503	QQL29BJ-100Z	COIL	10µH
	L504	QQL29BJ-100Z	COIL	10µH
	BK1	LP40077-001A	BRACKET(BOARD)	
	CN511	QGG2503K2-30	HEADER PIN,(1-30)MAIN	
	CN512	QGF1209F2-14	FFC/FPC CONNE,(1-14)MAIN	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
**********					
DV PRE/REC MDA BOARD ASSEMBLY <16>					
		PW2	LPA10117-03A2	DV PRE/REC MDA BOARD ASSY	
		IC5001	JCY0132	IC	
		IC5002	TC7SH00FU	IC(DIGITAL)	
		IC5501	BA6865KV	IC	
		IC5502	BA6417F	IC	
		Q5501	DTA114EU	TRANSISTOR	
		Q5502	2SB1302/ST/-X	TRANSISTOR	
		Q5503	2SB1302/ST/-X	TRANSISTOR	
		Q5504	2SB1302/ST/-X	TRANSISTOR	
		Q5505	2SC4097/QR/-X	TRANSISTOR	
		D5502	DAP222	DIODE	
		D5503	DAP222	DIODE	
		D5504	DAP222	DIODE	
		R5003	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5004	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
		R5007	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
		R5014	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R5018	NRSA63J-241X	MG RESISTOR	240Ω,1/16W
		R5019	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5020	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5021	NRSA63J-241X	MG RESISTOR	240Ω,1/16W
		R5023	NRSA63J-241X	MG RESISTOR	240Ω,1/16W
		R5026	NRSA63J-241X	MG RESISTOR	240Ω,1/16W
		R5035	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
		R5057	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
		R5058	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R5101	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5102	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5111	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5112	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5114	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5115	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5117	NQR0147-004X	FERRITE BEARS	
		R5118	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5119	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R5121	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5501	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R5502	NRSA63J-124X	MG RESISTOR	120kΩ,1/16W
		R5503	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R5504	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
		R5505	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
		R5506	NRV142F-R22X	CMF RESISTOR	0.22Ω,1/4W
		R5509	NRS12BK-R68W	MG RESISTOR	0.68Ω,1/2W
		R5510	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R5511	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R5512	NRSA63J-274X	MG RESISTOR	270kΩ,1/16W
		R5513	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
		R5514	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
		R5515	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
		R5516	NRSA63J-202X	MG RESISTOR	2kΩ,1/16W
		R5517	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
		R5518	NRSA63J-203X	MG RESISTOR	20kΩ,1/16W
		R5519	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
		R5520	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R5522	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R5523	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R5525	NRSA63J-511X	MG RESISTOR	510Ω,1/16W
		R5526	NRSA63J-511X	MG RESISTOR	510Ω,1/16W
		R5527	NRSA63J-511X	MG RESISTOR	510Ω,1/16W
		R5528	NRSA63J-511X	MG RESISTOR	510Ω,1/16W
		R5529	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R5530	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5531	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5533	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5534	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5536	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
		R5537	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R5543	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
		R5544	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
		R5545	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
		R5546	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
		R5547	NRSA02J-1R8X	MG RESISTOR	1.8Ω,1/10W
		R5548	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
		R5549	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R5550	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R5551	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5552	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5553	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5554	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5555	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5556	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5557	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5558	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5559	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5560	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R5561	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		C5002	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5003	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5004	NCB31CK-223X	CAPACITOR	0.022μF,16V
		C5005	NCB31CK-473X	CAPACITOR	0.047μF,16V
		C5006	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5007	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5008	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5009	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C5010	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5011	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5012	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C5034	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5035	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5036	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5037	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C5039	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5045	NCB31CK-473X	CAPACITOR	0.047μF,16V
		C5046	NCB31CK-473X	CAPACITOR	0.047μF,16V
		C5047	NCB31CK-473X	CAPACITOR	0.047μF,16V
		C5048	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C5049	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5050	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5051	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5052	NDC31HJ-102X	CAPACITOR	0.001μF,50V
		C5053	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5055	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5056	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5058	NCB20JM-475X	CAPACITOR	4.7μF,6.3V
		C5060	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5062	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C5063	NCB20JM-475X	CAPACITOR	4.7μF,6.3V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C5064	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5065	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5066	NEA70JM-226X	E CAPACITOR	22µF,6.3V
		C5101	QCBB1HJ-151	CAPACITOR	150pF,50V
		C5501	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5502	NEA71CM-106X	E CAPACITOR	10µF,16V
		C5503	NBE21AM-106X	T CAPACITOR	10µF,10V
		C5505	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5506	NCB31HK-152X	CAPACITOR	0.0015µF,50V
		C5507	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5508	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5509	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5510	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5511	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5512	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5513	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5514	NEA71CM-106X	E CAPACITOR	10µF,16V
		C5515	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5516	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5517	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5518	NCB31EK-223X	CAPACITOR	0.022µF,25V
		C5519	NCB31EK-223X	CAPACITOR	0.022µF,25V
		C5520	NCB31EK-223X	CAPACITOR	0.022µF,25V
		C5521	NCF21CZ-105X	CAPACITOR	1µF,16V
		C5522	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5523	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5525	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5526	NCB31EK-223X	CAPACITOR	0.022µF,25V
		C5527	NCB31CK-473X	CAPACITOR	0.047µF,16V
		C5528	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5531	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5532	NEA70JM-226X	E CAPACITOR	22µF,6.3V
		C5535	NEA71CM-106X	E CAPACITOR	10µF,16V
		C5536	NEA71CM-106X	E CAPACITOR	10µF,16V
		C5537	NEA70JM-226X	E CAPACITOR	22µF,6.3V
		C5539	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5540	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5541	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5544	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5546	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5547	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C5548	NCF21CZ-224X	CAPACITOR	0.22µF,16V
		C5549	NCF21CZ-224X	CAPACITOR	0.22µF,16V
		C5550	NCF21CZ-224X	CAPACITOR	0.22µF,16V
		C5551	NCB31EK-103X	CAPACITOR	0.01µF,25V
		C5552	NEA71CM-106X	E CAPACITOR	10µF,16V
		L5001	NQL144K-100X	COIL	10µH
		L5002	NQL144K-100X	COIL	10µH
		L5003	NQL144K-100X	COIL	10µH
		L5004	NQL144K-100X	COIL	10µH
		L5005	NQL144K-100X	COIL	10µH
		L5501	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		LC5501	PELN1148-223X	NOISE FILTER	
		LC5502	PELN1148-223X	NOISE FILTER	
		LC5503	PELN1148-223X	NOISE FILTER	
		LC5505	PELN1148-223X	NOISE FILTER	
		SD1	LP30467-001A	SHIELD COVER	
		QA5501	BA6254FS	TR ARRAY	
		CN5001	QGF0501F1-10X	FPC CONNECTOR,(1-10)DV VIDEO	
		CN5002	QGF0503F2-26X	FFC/FPC CONNECTOR,(1-26)DV MAIN	
		CN5501	QGA2001F2-05V	CONNECTOR,(1-5)REG	

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION
		CN5502	QGA1201C2-02X	CONNECTOR,(1-2)LOADING MOTOR
		CN5503	QGF0504C1-11X	FPC CONNECTOR,(1-11)DV DRUM MOTOR
		CN5504	QGF0501F1-18X	FPC CONNECTOR,(1-18)DV CAPSTAN
		CN5505	QGA1201C2-04X	CONNECTOR,(1-4)DV ENCODER
		CN5506	QGF0503F2-20X	FFC/FPC CONNECTOR,(1-20)DV MAIN
		CN5507	QGA1201C2-04X	CONNECTOR,(1-4)DV HOUSING MOTOR

****

ON SCREEN BOARD ASSEMBLY <17>

	PW1	LPA10127-04A	ON SCREEN BOARD ASSY
	IC851	LC74785N-9762	IC (OSD)
	IC852	MM1115XF	IC
	Q853	2SA1576A/QR/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q854	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
	Q855	2SC4081/QRS/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
	Q857	2SA1576A/QR/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q858	2SC4081/QRS/-X	TRANSISTOR
		or 2PC4081/R/-X	TRANSISTOR
		or 2SD1819A/QRS/-X	TRANSISTOR
	Q859	2SA1576A/QR/-X	TRANSISTOR
		or 2SB1218A/QR/-X	TRANSISTOR
		or 2PA1576/R/-X	TRANSISTOR
	Q860	DTC114EU	TRANSISTOR
		or PDTC114EU	TRANSISTOR
		or RN1302	TRANSISTOR
		or UN5211	TRANSISTOR
	D851	1SS133	DIODE
		or 1N4148M	DIODE
	D852	1SS133	DIODE
		or 1N4148M	DIODE
	D853	1SS133	DIODE
		or 1N4148M	DIODE
	D854	1SS133	DIODE
		or 1N4148M	DIODE
	D855	DA204U	DIODE
	R851	QRE141J-102Y	RESISTOR 1kΩ,1/4W
	R852	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
	R854	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
	R855	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	R856	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W
	R857	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	R860	NRSA02J-0R0X	MG RESISTOR 0Ω,1/10W
	R861	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R862	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R863	NRSA02J-102X	MG RESISTOR 1kΩ,1/10W
	R864	NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
	R865	NRSA02J-681X	MG RESISTOR 680Ω,1/10W
	R866	NRSA02J-681X	MG RESISTOR 680Ω,1/10W
	R867	NRSA02J-182X	MG RESISTOR 1.8kΩ,1/10W
	R872	NRSA02J-103X	MG RESISTOR 10kΩ,1/10W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R873	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R874	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R879	NRSA02J-332X	MG RESISTOR	3.3kΩ,1/10W
		R880	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		R881	NRSA02J-471X	MG RESISTOR	470Ω,1/10W
		R882	NRSA02J-184X	MG RESISTOR	180kΩ,1/10W
		R883	NRSA02J-822X	MG RESISTOR	8.2kΩ,1/10W
		R884	NRSA02J-272X	MG RESISTOR	2.7kΩ,1/10W
		R885	NRSA02J-153X	MG RESISTOR	15kΩ,1/10W
		R886	NRSA02J-681X	MG RESISTOR	680Ω,1/10W
		R887	NRSA02J-103X	MG RESISTOR	10kΩ,1/10W
		R888	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R889	NRSA02J-472X	MG RESISTOR	4.7kΩ,1/10W
		R891	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B852	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B854	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B855	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B860	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B861	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		B862	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
		C851	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C852	NCB21EK-224X	CAPACITOR	0.22μF,25V
		C853	NCB21CK-105X	CAPACITOR	1μF,16V
		C854	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C856	NCB21CK-105X	CAPACITOR	1μF,16V
		C859	NDC21HJ-680X	CAPACITOR	68pF,50V
		C860	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C861	NDC21HJ-150X	CAPACITOR	15pF,50V
		C862	NDC21HJ-820X	CAPACITOR	82pF,50V
		C863	NDC21HJ-101X	CAPACITOR	100pF,50V
		C865	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C867	NDC21HJ-330X	CAPACITOR	33pF,50V
		C868	NDC21HJ-330X	CAPACITOR	33pF,50V
		C874	NCB21EK-224X	CAPACITOR	0.22μF,25V
		C877	QEKJ1CM-476	E CAPACITOR	47μF,16V
		C878	NCB21HK-103X	CAPACITOR	0.01μF,50V
		C879	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C881	NCB21HK-471X	CAPACITOR	470pF,50V
		C882	NCB21HK-223X	CAPACITOR	0.022μF,50V
		C883	QEKJ1HM-225	E CAPACITOR	2.2μF,50V
		C884	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C885	NCB21EK-104X	CAPACITOR	0.1μF,25V
		C886	NCB21EK-104X	CAPACITOR	0.1μF,25V
		L851	QQL01BK-1R0Z	COIL	1μH
		L855	QQL071J-220Y	COIL	22μH
		L856	QQL071J-151Y	COIL	150μH
		L857	QUY153-050Y	IM BUS WIRE	
		L858	QQL37CJ-220Z	COIL	22μH
		L859	QQL29BJ-4R7Z	COIL	4.7μH
		T851	PELN0806	LC TRAP	
		BK1	LP40077-001A	BRACKET(BOARD)	
		CN851	QGG2502K1-20	HEADER PIN	

****

EJECT SW BOARD ASSEMBLY <27>

	PW5	LPA10126-01C5	EJECT SW BOARD ASSY
	S7011	QSW0456-002Z	TACT SWITCH,VHS EJECT
	FW7005	QUM022-15A4A4	PARA RIBON WIRE

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	

****

SW/DISPLAY BOARD ASSEMBLY <28>

		PW1	LPA10126-01C1	SW/DISPLAY BOARD ASSY	
		IC7001	M35500BGP	IC	
			or M35500AGP	IC	
			or M35500BFP	IC	
		IC7002	PNA4652M00XB	IR DETECT UNIT	
			or GP1U281X	IR DETECT UNIT	
		D7002	RD9.1ES/B2/-T2	ZENER DIODE	
			or UZ9.1BSB	ZENER DIODE	
			or MTZJ9.1B	ZENER DIODE	
		D7004	1SS133	DIODE	
			or 1N4148M	DIODE	
		D7005	1SS133	DIODE	
			or 1N4148M	DIODE	
		D7006	1SS133	DIODE	
			or 1N4148M	DIODE	
		D7009	SLR-342DU3F	LE DIODE	
		D7010	SLR-342MG3F	LE DIODE	
		D7011	SLR-342VR3F	LE DIODE	
		D7013	SLR-342MG3F	LE DIODE	
		D7014	SLR-342VR3F	LE DIODE	
		D7015	SLR-342MG3F	LE DIODE	
		D7016	SLR-342MG3F	LE DIODE	
		R7001	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7002	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7003	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7004	QRE141J-471Y	RESISTOR	470Ω,1/4W
		R7006	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7007	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7008	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7013	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7014	QUY153-050Y	IM BUS WIRE	
		R7015	QUY153-050Y	IM BUS WIRE	
		R7020	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7021	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R7022	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
		R7023	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R7024	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
		R7025	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
		R7026	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
		R7027	QRE141J-153Y	RESISTOR	15kΩ,1/4W
		R7028	QRE141J-393Y	RESISTOR	39kΩ,1/4W
		R7030	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7031	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R7032	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
		R7033	QRE141J-222Y	RESISTOR	2.2kΩ,1/4W
		R7034	QRE141J-272Y	RESISTOR	2.7kΩ,1/4W
		R7035	QRE141J-472Y	RESISTOR	4.7kΩ,1/4W
		R7036	QRE141J-682Y	RESISTOR	6.8kΩ,1/4W
		R7037	QRE141J-153Y	RESISTOR	15kΩ,1/4W
		R7038	QRE141J-393Y	RESISTOR	39kΩ,1/4W
		R7040	QRE141J-103Y	RESISTOR	10kΩ,1/4W
		R7041	QRE141J-122Y	RESISTOR	1.2kΩ,1/4W
		R7042	QRE141J-182Y	RESISTOR	1.8kΩ,1/4W
		R7051	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7052	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7053	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7054	QRE141J-331Y	RESISTOR	330Ω,1/4W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R7055	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7057	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7058	QRE141J-331Y	RESISTOR	330Ω,1/4W
		R7059	QRE141J-331Y	RESISTOR	330Ω,1/4W
		C7001	QCFB1HZ-104	CAPACITOR	0.1µF,50V
		C7002	QETN1HM-106	E CAPACITOR	10µF,50V
		C7007	QEKC0JM-476	E CAPACITOR	47µF,6.3V
		C7009	QCSB1HJ-150	CAPACITOR	15pF,50V
		C7010	QCFB1HZ-104	CAPACITOR	0.1µF,50V
		C7011	QEKC1AM-227	E CAPACITOR	220µF,10V
		C7019	QDVB1EZ-223Y	CAPACITOR	0.022µF,25V
		L7001	QUY153-050Y	IM BUS WIRE	
		S7001	QSW0456-002Z	TACT SWITCH,POWER	
		S7002	QSW0456-002Z	TACT SWITCH,CH+	
		S7003	QSW0456-002Z	TACT SWITCH,CH-	
		S7004	QSW0456-002Z	TACT SWITCH,REC	
		S7005	QSW0456-002Z	TACT SWITCH,PAUSE	
		S7006	QSW0456-002Z	TACT SWITCH,PLAY	
		S7007	QSW0456-002Z	TACT SWITCH,STOP	
		S7012	QSW0456-002Z	TACT SWITCH,S-VHS ET	
		S7013	QSW0456-002Z	TACT SWITCH,VHS	
		S7014	QSW0456-002Z	TACT SWITCH,DV EJECT	
		S7015	QSW0456-002Z	TACT SWITCH,RAE/REW	
		S7016	QSW0456-002Z	TACT SWITCH,INSERT	
		S7017	QSW0456-002Z	TACT SWITCH,A.DUB	
		S7018	QSW0456-002Z	TACT SWITCH,IN/OUT	
		S7019	QSW0456-002Z	TACT SWITCH,START	
		S7021	QSW0456-002Z	TACT SWITCH,DV-VHS	
		S7022	QSW0456-002Z	TACT SWITCH,VHS-DV	
		S7023	QSW0456-002Z	TACT SWITCH,DUB	
		DI7001	QLF0031-002	FL TUBE	
		HD1	PQ34949	FDP HOLDER(L),DI7001	
		HD2	PQ34950	FDP HOLDER(R),DI7001	
		HD3	PQ40795-2-2	LED HOLDER,D7009	
		HD4	PQM30038-1-2	LED HOLDER,D7010	
		HD5	PQM30038-1-2	LED HOLDER,D7011	
		HD6	PQM30038-1-2	LED HOLDER,D7013	
		HD7	PQM30038-1-2	LED HOLDER,D7014	
		HD8	PQM30038-1-2	LED HOLDER,D7015	
		HD9	PQM30038-1-2	LED HOLDER,D7016	
		CN7001	QGF1207F1-18	FPC CONNECTOR,(1-18)MAIN	

****

JACK BOARD ASSEMBLY <36>

PW2	LPA10126-01C2	JACK BOARD ASSY	
D7063	1SS133	DIODE	
	or 1N4148M	DIODE	
D7064	1SS133	DIODE	
	or 1N4148M	DIODE	
D7065	1SS133	DIODE	
	or 1N4148M	DIODE	
D7066	1SS133	DIODE	
	or 1N4148M	DIODE	
R7061	QRE141J-750Y	RESISTOR	75Ω,1/4W
R7063	QRE141J-750Y	RESISTOR	75Ω,1/4W
R7064	QRE141J-750Y	RESISTOR	75Ω,1/4W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C7061	QDYB1CM-103Y	CAPACITOR	0.01µF,16V
		C7062	QCBB1HJ-681	CAPACITOR	680pF,50V
		C7064	QCBB1HJ-681	CAPACITOR	680pF,50V
		L7061	QQL071J-100Y	COIL	10µH
		L7062	QQL071J-100Y	COIL	10µH
		J7001	QND0085-001	S JACK,S VIDEO	
		J7002	PEMC1126-04	PIN JACK,V IN	
		J7003	PEMC0922-02	PIN JACK(SW),R IN	
		J7004	PEMC0922-03	PIN JACK(SW),L IN	
		J7005	PU60659	MINI JACK,R.PAUSE	
		WR7001	QUB220-16A4XL	SIN TWIST WIRE	
		CN7002	QGF1207F1-16	FPC CONNECTOR,(1-16)VHS MAIN	

****

LED/SW BOARD ASSEMBLY <47>

PW3	LPA10126-01C3	LED/SW BOARD ASSY
D7012	SLR-342DU3F	LE DIODE
S7010	QSW0456-001Z	TACT SWITCH
FW7003	QUM034-04A4A4	PARA RIBON WIRE

****

DV MAIN BOARD ASSEMBLY <50>

PW1	LPA10117-03E1	DV MAIN BOARD ASSY
IC1001	MN1021617FN	IC(MCU)
IC1002	TC7W04FU	IC(DIGITAL)
IC1005	S-80823ANNP-W	IC
IC1006	RS5C314	IC
IC1007	25LC160-I/SN-X	IC
	or X25170S8I-2.5-X	IC
IC1008	TC7W08F	IC
IC1009	MM1426CN	IC
IC1010	MM1426CN	IC
IC1501	MN103004KFD	IC(MCU)
IC1502	TC7W14FK	IC
IC2001	JCY0133	IC
IC2002	JCY0136	IC
IC2003	MM1385NN	IC
IC2004	MM1385JN	IC
IC2007	TLC2940IPW	IC
IC3001	JCP8029	IC
IC3101	TC7SH04F	IC(DIGITAL)
IC3102	TC7SH04F	IC(DIGITAL)
IC3151	M62366GP	IC
IC3501	NJM2538V	IC
IC3502	MM1385HN	IC
IC3701	AK4518-VF-X	IC
	or PCM3006	IC
IC3702	BA15218F-XE	IC
IC3703	BA15218F-XE	IC
Q1001	2SC4617/RS/-X	TRANSISTOR

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		Q1002	2SC4617/RS/-X	TRANSISTOR	
		Q1011	2SB1302/ST/-X	TRANSISTOR	
		Q1012	DTC144EE	TRANSISTOR	
		Q1013	2SB1302/ST/-X	TRANSISTOR	
		Q1014	DTC144EE	TRANSISTOR	
		Q1015	2SB1302/ST/-X	TRANSISTOR	
		Q1016	DTC144EE	TRANSISTOR	
		Q1017	2SB1302/ST/-X	TRANSISTOR	
		Q1018	DTC144EE	TRANSISTOR	
		Q1501	DTA114EE	TRANSISTOR	
		Q1602	UMC3N	TRANSISTOR	
		Q1603	UMC3N	TRANSISTOR	
		Q3101	2SA1576A/RS/-X	TRANSISTOR	
		Q3102	2SA1576A/RS/-X	TRANSISTOR	
		Q3111	2SA1576A/RS/-X	TRANSISTOR	
		Q3112	HN1B04FU/YG/-X	PAIR TRANSISTOR	
		Q3113	2SC4081/RS/-X	TRANSISTOR	
		Q3114	2SC4081/S/-X	TRANSISTOR	
		Q3115	DTC144EE	TRANSISTOR	
		Q3131	2SA1576A/RS/-X	TRANSISTOR	
		Q3132	HN1B04FU/YG/-X	PAIR TRANSISTOR	
		Q3133	2SC4081/RS/-X	TRANSISTOR	
		Q3501	DTC144EE	TRANSISTOR	
		Q3502	2SA1576A/RS/-X	TRANSISTOR	
		Q3503	2SA1576A/RS/-X	TRANSISTOR	
		D1001	SB007W03Q	SB DIODE	
		D1002	SB007W03Q	SB DIODE	
		D1101	1SS133	DIODE	
		D1501	SB007W03Q	SB DIODE	
		D2002	EC2C01C	VARI CAP DIODE	
		D2003	EC2C01C	VARI CAP DIODE	
		D2004	EC2C01C	VARI CAP DIODE	
		R1002	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1025	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1027	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
		R1028	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1029	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1030	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1031	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1032	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1033	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1035	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1037	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1038	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1041	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1043	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1045	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1046	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1047	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1048	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1049	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1050	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1051	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
		R1052	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
		R1053	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1061	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R1062	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R1063	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1064	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R1065	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1081	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1082	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1083	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R1084	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
		R1085	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
		R1091	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1092	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1093	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1094	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R1095	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1096	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R1098	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1099	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1100	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1103	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1105	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1106	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1107	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1114	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1117	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1118	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1119	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1120	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1125	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1126	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1501	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1502	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1503	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1504	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1505	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1506	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1514	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1515	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1516	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1517	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1518	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1519	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R1520	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1521	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R1522	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R1523	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1524	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1525	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1526	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1527	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1528	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1535	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1536	NRSA63J-202X	MG RESISTOR	2kΩ,1/16W
		R1537	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1538	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1539	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1540	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1546	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1547	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1552	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1553	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1558	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1560	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1562	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1563	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1564	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1565	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R1566	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1567	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1568	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R1569	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1575	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1576	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1577	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1578	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1579	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1580	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1581	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1587	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1591	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1592	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1593	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R1601	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1602	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1603	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1605	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1606	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1607	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1608	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1609	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1611	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1612	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1613	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1614	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1615	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1616	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1617	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1618	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1619	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1631	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
		R1636	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1641	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1642	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1644	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1645	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1646	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1647	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1648	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1649	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1650	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1651	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1653	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1655	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R1661	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R1663	NRSA63J-330X	MG RESISTOR	33Ω,1/16W
		R1665	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
		R1666	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
		R1667	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R1668	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2010	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2011	NRSA63J-151X	MG RESISTOR	150Ω,1/16W
		R2012	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R2013	NRSA63J-151X	MG RESISTOR	150Ω,1/16W
		R2014	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R2015	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2016	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R2017	NRSA63J-220X	MG RESISTOR	22Ω,1/16W
		R2018	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
		R2019	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R2020	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2021	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2022	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R2023	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R2027	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W
		R2033	NRSA63J-242X	MG RESISTOR	2.4kΩ,1/16W
		R2034	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
		R2035	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
		R2036	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
		R2037	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
		R2038	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
		R2039	NRSA63J-560X	MG RESISTOR	56Ω,1/16W
		R2040	NRSA63J-512X	MG RESISTOR	5.1kΩ,1/16W
		R2041	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R2042	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R2043	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R2044	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2047	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W
		R2048	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W
		R2049	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2050	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R2052	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2053	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2054	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2055	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2056	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2057	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2058	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2059	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2060	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2061	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2062	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2082	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2083	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2084	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2085	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2086	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2087	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R2088	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R2089	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2090	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2091	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2092	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2093	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2094	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2098	NQR0146-004X	FERRITE BEAD	
		R2101	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2102	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2103	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2104	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2106	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2107	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2108	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R2109	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R2110	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R2112	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2113	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2114	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2115	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2116	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R2117	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2118	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2119	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2121	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2122	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2123	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2124	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2125	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2126	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2140	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2141	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2142	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R2145	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
		R2146	NRSA63J-392X	MG RESISTOR	3.9kΩ,1/16W
		R2149	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R2150	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R3003	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
		R3004	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R3005	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R3007	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3008	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
		R3024	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3025	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3026	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3027	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3028	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3029	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3032	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3033	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3034	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3035	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3048	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3054	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3056	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3057	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3058	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3064	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3065	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3069	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3070	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3071	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3073	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
		R3074	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
		R3076	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
		R3078	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
		R3079	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
		R3080	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3101	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3102	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3103	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
		R3104	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3105	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3106	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R3111	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
		R3112	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
		R3113	NRSA63J-220X	MG RESISTOR	22Ω,1/16W
		R3114	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R3115	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
		R3116	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3117	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R3118	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
		R3119	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
		R3120	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R3121	NRVA63D-821X	CMF RESISTOR	820Ω,1/16W
		R3122	NRVA63D-821X	CMF RESISTOR	820Ω,1/16W
		R3123	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R3124	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
		R3125	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
		R3131	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
		R3132	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
		R3133	NRSA63J-220X	MG RESISTOR	22Ω,1/16W
		R3134	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R3135	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
		R3136	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
		R3137	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R3138	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
		R3139	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
		R3140	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R3141	NRVA63D-821X	CMF RESISTOR	820Ω,1/16W
		R3142	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3143	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
		R3161	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
		R3162	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
		R3163	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3164	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3501	NRSA63J-225X	MG RESISTOR	2.2MΩ,1/16W
		R3502	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3503	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3504	NRSA63J-121X	MG RESISTOR	120Ω,1/16W
		R3505	NRSA63J-680X	MG RESISTOR	68Ω,1/16W
		R3506	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
		R3507	NRSA63J-680X	MG RESISTOR	68Ω,1/16W
		R3508	NRSA63J-750X	MG RESISTOR	75Ω,1/16W
		R3509	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W
		R3510	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3511	NRSA63J-203X	MG RESISTOR	20kΩ,1/16W
		R3512	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3521	NRSA63J-621X	MG RESISTOR	620Ω,1/16W
		R3522	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R3523	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R3524	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R3526	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
		R3527	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
		R3528	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
		R3529	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
		R3532	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3534	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3701	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
		R3702	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
		R3703	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
		R3704	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
		R3705	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3709	NRSA63J-100X	MG RESISTOR	10Ω,1/16W
		R3711	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W
		R3712	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W
		R3713	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3714	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3715	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3716	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3717	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		R3718	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3719	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		R3720	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3721	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
		R3722	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
		R3723	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3726	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
		R3727	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
		R3728	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
		R3731	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3732	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3733	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3734	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3735	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3736	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R3740	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
		R4001	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R4002	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		R4011	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
		RA1001	NRZ0040-102X	NETWORK RESISTOR	
		RA1002	NRZ0040-102X	NETWORK RESISTOR	
		RA1003	NRZ0040-102X	NETWORK RESISTOR	
		RA1004	NRZ0040-102X	NETWORK RESISTOR	
		RA1005	NRZ0040-104X	NETWORK RESISTOR	
		RA1006	NRZ0040-104X	NETWORK RESISTOR	
		RA1501	NRZ0040-0R0X	NETWORK RESISTOR	
		RA1502	NRZ0040-0R0X	NETWORK RESISTOR	
		RA1503	NRZ0040-0R0X	NETWORK RESISTOR	
		RA1504	NRZ0040-0R0X	NETWORK RESISTOR	
		RA1505	NRZ0040-102X	NETWORK RESISTOR	
		RA1506	NRZ0040-102X	NETWORK RESISTOR	
		RA1507	NRZ0040-102X	NETWORK RESISTOR	
		RA1508	NRZ0040-102X	NETWORK RESISTOR	
		RA1509	NRZ0040-102X	NETWORK RESISTOR	
		RA1510	NRZ0040-473X	NETWORK RESISTOR	
		RA4001	NRZ0040-0R0X	NETWORK RESISTOR	
		RA4002	NRZ0040-0R0X	NETWORK RESISTOR	
		C1001	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1002	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1006	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1007	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1008	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1010	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1011	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1021	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1041	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1042	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1043	NDC31HJ-120X	CAPACITOR	12pF,50V
		C1044	NDC31HJ-120X	CAPACITOR	12pF,50V
		C1045	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1047	NBE21AM-106X	T CAPACITOR	10μF,10V
		C1051	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C1052	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1053	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C1054	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1055	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C1056	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1057	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C1058	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1059	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C1060	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1061	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1062	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1063	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C1064	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1067	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1068	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1069	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C1070	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C1501	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1502	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1504	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1505	NCB31EK-103X	CAPACITOR	0.01μF,25V
		C1506	NCB31EK-103X	CAPACITOR	0.01μF,25V
		C1507	NCB31EK-103X	CAPACITOR	0.01μF,25V
		C1508	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1509	NEA70JM-476X	E CAPACITOR	47μF,6.3V
		C1510	NEA70JM-476X	E CAPACITOR	47μF,6.3V
		C1515	NCB31EK-223X	CAPACITOR	0.022μF,25V
		C1516	NCB31EK-223X	CAPACITOR	0.022μF,25V
		C1517	NCB31EK-223X	CAPACITOR	0.022μF,25V
		C1518	NCB31EK-223X	CAPACITOR	0.022μF,25V
		C1521	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1522	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C1523	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2001	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2002	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2003	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2005	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2006	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2007	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2008	NDC31HJ-120X	CAPACITOR	12pF,50V
		C2009	NDC31HJ-120X	CAPACITOR	12pF,50V
		C2010	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2011	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2014	NDC31HJ-390X	CAPACITOR	39pF,50V
		C2015	NDC31HJ-102X	CAPACITOR	0.001μF,50V
		C2016	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2017	NCF21CZ-105X	CAPACITOR	1μF,16V
		C2018	NCB31EK-472X	CAPACITOR	0.0047μF,25V
		C2019	NDC31HJ-271X	CAPACITOR	270pF,50V
		C2020	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2022	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2023	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2024	NDC31HJ-6R0X	CAPACITOR	6pF,50V
		C2025	NDC31HJ-6R0X	CAPACITOR	6pF,50V
		C2026	NDC31HJ-102X	CAPACITOR	0.001μF,50V
		C2027	NDC31HJ-390X	CAPACITOR	39pF,50V
		C2028	NDC31HJ-102X	CAPACITOR	0.001μF,50V
		C2029	NDC31HJ-330X	CAPACITOR	33pF,50V
		C2031	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2032	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2033	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2036	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2037	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2038	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2039	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2040	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2041	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2042	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2043	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2044	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2051	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2052	NCF21CZ-105X	CAPACITOR	1μF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C2053	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2054	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2055	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2056	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2057	NCF21CZ-105X	CAPACITOR	1μF,16V
		C2058	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2059	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2060	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2061	NCF21CZ-105X	CAPACITOR	1μF,16V
		C2062	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2101	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2102	NDC31HJ-151X	CAPACITOR	150pF,50V
		C2104	NCB31EK-473X	CAPACITOR	0.047μF,25V
		C2105	NBE21AM-106X	T CAPACITOR	10μF,10V
		C2106	NCF21CZ-105X	CAPACITOR	1μF,16V
		C2107	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2108	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2109	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2110	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2111	NCF21CZ-105X	CAPACITOR	1μF,16V
		C2112	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C2113	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C2114	NCB31EK-103X	CAPACITOR	0.01μF,25V
		C2115	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3001	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3002	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3003	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3004	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3005	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3006	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3007	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3008	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3009	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3010	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3011	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3012	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3013	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3014	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3015	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3016	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3017	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3101	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3102	QEKJ0JM-337	E CAPACITOR	330μF,6.3V
		C3103	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3106	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3107	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3108	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3109	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3111	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3112	NEA70JM-476X	E CAPACITOR	47μF,6.3V
		C3113	NDC31HJ-220X	CAPACITOR	22pF,50V
		C3114	NDC31HJ-8R0X	CAPACITOR	8pF,50V
		C3115	NDC31HJ-220X	CAPACITOR	22pF,50V
		C3116	NCB20JM-475X	CAPACITOR	4.7μF,6.3V
		C3118	NCB21CK-334X	CAPACITOR	0.33μF,16V
		C3119	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3121	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3122	NDC31HJ-8R0X	CAPACITOR	8pF,50V
		C3124	NDC31HJ-120X	CAPACITOR	12pF,50V
		C3125	NCB20JM-475X	CAPACITOR	4.7μF,6.3V
		C3126	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C3127	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3128	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3131	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3132	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3140	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3141	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3142	NDC31HJ-8R0X	CAPACITOR	8pF,50V
		C3143	NDC31HJ-8R0X	CAPACITOR	8pF,50V
		C3501	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3502	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3503	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3504	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3505	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C3506	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3507	NDC31HJ-220X	CAPACITOR	22pF,50V
		C3508	NDC31HJ-220X	CAPACITOR	22pF,50V
		C3509	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3510	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3511	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3512	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
		C3513	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3514	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3515	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3520	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C3521	NEA70JM-107X	E CAPACITOR	100μF,6.3V
		C3522	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3523	NEA70JM-226X	E CAPACITOR	22μF,6.3V
		C3524	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3525	NBE21AM-106X	T CAPACITOR	10μF,10V
		C3531	NDC31HJ-120X	CAPACITOR	12pF,50V
		C3532	NDC31HJ-150X	CAPACITOR	15pF,50V
		C3533	NDC31HJ-470X	CAPACITOR	47pF,50V
		C3534	NDC31HJ-390X	CAPACITOR	39pF,50V
		C3535	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3536	NDC31HJ-120X	CAPACITOR	12pF,50V
		C3537	NDC31HJ-150X	CAPACITOR	15pF,50V
		C3538	NDC31HJ-470X	CAPACITOR	47pF,50V
		C3539	NDC31HJ-390X	CAPACITOR	39pF,50V
		C3540	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3701	NCF21CZ-105X	CAPACITOR	1μF,16V
		C3702	NCF21CZ-105X	CAPACITOR	1μF,16V
		C3703	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3704	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3705	NDC31HJ-151X	CAPACITOR	150pF,50V
		C3706	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3707	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3708	NDC31HJ-151X	CAPACITOR	150pF,50V
		C3709	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3710	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3711	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3712	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3713	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3714	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3715	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3716	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3717	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3718	NEA71CM-106X	E CAPACITOR	10μF,16V
		C3725	NCB31HK-332X	CAPACITOR	0.0033μF,50V
		C3726	NCB31HK-682X	CAPACITOR	0.0068μF,50V
		C3728	NCB31CK-104X	CAPACITOR	0.1μF,16V
		C3729	NEA71CM-476X	E CAPACITOR	47μF,16V

#	⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
		C3730	NEA71CM-476X	E CAPACITOR	47µF,16V
		C3731	NCB31CK-104X	CAPACITOR	0.1µF,16V
		C3733	NCB31HK-332X	CAPACITOR	0.0033µF,50V
		C3734	NCB31HK-682X	CAPACITOR	0.0068µF,50V
		L1011	NQL144K-100X	COIL	10µH
		L1012	NQL17CM-390X	COIL	39µH
		L1013	NQL17CM-390X	COIL	39µH
		L1015	NQL17CM-390X	COIL	39µH
		L1018	NQL17CM-390X	COIL	39µH
		L1501	NQL144K-100X	COIL	10µH
		L1502	NQL144K-100X	COIL	10µH
		L2001	NQL144K-100X	COIL	10µH
		L2002	NQL144K-100X	COIL	10µH
		L2003	NQL144K-100X	COIL	10µH
		L2004	NQL144K-100X	COIL	10µH
		L2005	NQL144K-100X	COIL	10µH
		L2006	NQL144K-100X	COIL	10µH
		L2007	NQL144K-100X	COIL	10µH
		L2008	NQL144K-100X	COIL	10µH
		L2009	NQL024J-2R2X	COIL	2.2µH
		L2010	NQL024J-100X	COIL	10µH
		L2011	NQL024J-120X	COIL	12µH
		L2015	NQR0276-001X	COIL	10µH
		L3103	NQL144K-100X	COIL	10µH
		L3104	NQL144K-100X	COIL	10µH
		L3111	NQL024J-150X	COIL	15µH
		L3131	NQL024J-150X	COIL	15µH
		L3151	NQL144K-100X	COIL	10µH
		L3531	NQL024J-120X	COIL	12µH
		L3532	NQL024J-270X	COIL	27µH
		L3533	NQL024J-120X	COIL	12µH
		L3534	NQL024J-270X	COIL	27µH
		L3701	NQL144K-100X	COIL	10µH
		L3702	NQL144K-100X	COIL	10µH
		LC1002	PELN1148-223X	NOISE FILTER	
		LC1003	PELN1148-223X	NOISE FILTER	
		LC1005	PELN1148-223X	NOISE FILTER	
		LC3101	PELN0969-04Y	NOISE FILTER	
		X1001	NAX0294-001X	RESONATOR	
		X1002	NAX0005-001X	CRYSTAL RESONATOR	
		X2001	NAX0141-001X	CRYSTAL RESONATOR	
		X2003	NAX0206-001X	CRYSTAL RESONATOR	
		X3101	NAX0218-001X	CRYSTAL RESONATOR	
		K1001	NQR0129-002X	FERRITE BEAD	
		K1011	NQR0129-002X	FERRITE BEAD	
		K1012	NQR0129-002X	FERRITE BEAD	
		K2001	NQR0129-002X	FERRITE BEAD	
		K3101	NRSA63J-820X	MG RESISTOR	82Ω,1/16W
		J2001	QNZ0097-001	D CONNECTOR,DV IN/OUT	
		OT1	PU59915-105	#500SPACER0.01	
		OT2	PU59915-105	#500SPACER0.01,C3102	
		WR1101	YU40017-080-1	THIN WIRE	
		CN1001	QGA2001F2-10V	CONNECTOR,(1-10)REG	
		CN1002	QGF1016F2-06W	FFC/FPC CONNECTOR,(1-6)VHS MAIN	
		CN1101	QGB0801L1-26X	CONNECTOR,(1-26)JIG	
		CN1501	QGF0508F1-20X	FPC CONNECTOR,(1-20)PRE/REC	
		CN1502	QGF0503C1-15V	FFC/FPC CONNECTOR,(1-15)MECHA	
		CN2001	QGF0508F1-26X	FPC CONNECTOR,(1-26)DV PRE/REC	
		CN3501	QGA2001F2-06V	CONNECTOR,(1-6)VIDEO	
		CN3701	QGF1016F4-08W	FFC/FPC CONNECTOR,(1-8)AUDIO	

****

LOADING MOTOR BOARD ASSEMBLY <55>

PW1	LPA10010-01A2	LOADING MOTOR BOARD ASSY
CN1	QGB2533K1-02	CONNECTOR

****

JOG BOARD ASSEMBLY <85>

PW6	LPA10126-01C6	JOG BOARD ASSY
UN7091	PEME0786-02	JOG SHUTTLE ASSY
B7094	QUY153-050Y	IM BUS WIRE
FW7007	QUM036-06A4A4	PARA RIBON WIRE